

Supplementary Table 6. C227-11 versus 55989 gene expression signature.

| gene name | reference name     | strand | start position | end position | C227_Samp1  | C227_Sample2 | C227_Sample3 | 55989_sample1 | 55989_sample2 | 55989_sample3 | log2 fold change | log10 p value | log10 FDR   |
|-----------|--------------------|--------|----------------|--------------|-------------|--------------|--------------|---------------|---------------|---------------|------------------|---------------|-------------|
| C8TNI9    | TY-2482_chromosome | +      | 1              | 630          | 236.2059686 | 274.5404822  | 255.7519012  | 0             | 0             | 0             | 12.06318334      | 106.5808696   | 105.3235041 |
| Q4E6D2    | TY-2482_chromosome | +      | 2              | 328          | 136.7683037 | 122.300088   | 160.3353425  | 0             | 0             | 0             | 11.28194509      | 65.0223668    | 63.96655675 |
| P09748    | TY-2482_chromosome | -      | 21             | 1145         | 164.804632  | 201.2503615  | 182.4816922  | 0             | 0             | 0             | 11.57013746      | 80.51835562   | 79.37274926 |
| O07102    | TY-2482_chromosome | +      | 523            | 996          | 1861.525175 | 1999.947022  | 2097.371352  | 0             | 0             | 0             | 15.05367316      | 325.0237216   | 323.0330172 |
| E9Z073    | TY-2482_chromosome | +      | 606            | 1514         | 348.3982876 | 387.8953946  | 396.3235619  | 0             | 0             | 0             | 12.64932195      | 144.6477704   | 143.2047683 |
| D3GUR0    | TY-2482_chromosome | -      | 778            | 2049         | 193.4857819 | 221.7887191  | 171.5279069  | 0             | 0             | 0             | 11.64438641      | 82.7234915    | 81.56051105 |
| A0A1K7    | TY-2482_chromosome | -      | 1029           | 1549         | 449.5984811 | 361.6044598  | 416.6174587  | 0             | 0             | 0             | 12.82150986      | 149.9182498   | 148.4504242 |
| B7LWW4    | TY-2482_chromosome | -      | 1763           | 2164         | 1394.347343 | 1382.370209  | 1271.832654  | 180.2207773   | 239.2122935   | 208.485286    | 2.67655181       | 117.6146542   | 116.2983966 |
| Q6JB04    | TY-2482_chromosome | -      | 1789           | 2346         | 258.0012743 | 359.6484705  | 323.124553   | 0             | 0             | 0             | 12.33066609      | 113.397601    | 112.1126261 |
| B7LWW2    | TY-2482_chromosome | -      | 2268           | 3062         | 1978.542553 | 2225.122193  | 2124.92053   | 53.14665956   | 94.75532601   | 72.15595585   | 4.827704978      | 282.0956449   | 280.2102836 |
| D9Z518    | TY-2482_chromosome | -      | 2359           | 2970         | 482.1441035 | 602.3465885  | 605.9468167  | 0             | 0             | 0             | 13.21170995      | 185.1697425   | 183.5786779 |
| P0CE57    | TY-2482_chromosome | -      | 2658           | 3638         | 498.3651305 | 425.7990702  | 441.2696488  | 0.082333883   | 0.123646902   | 3.523515917   | 8.60143551       | 164.6252662   | 163.0972534 |
| Q6JB02    | TY-2482_chromosome | -      | 2990           | 4072         | 392.6550872 | 480.5263968  | 483.8569046  | 0             | 0             | 0             | 12.89721401      | 156.8814593   | 155.3845819 |
| E7JSW2    | TY-2482_chromosome | -      | 3233           | 3600         | 475.5253301 | 646.2540224  | 517.4988046  | 36.68357391   | 46.39347983   | 48.29277954   | 3.563548758      | 102.0716166   | 100.83574   |
| B7LFP9    | TY-2482_chromosome | +      | 4028           | 4598         | 1164.412864 | 1272.597601  | 1383.160529  | 1134.652737   | 1074.032931   | 1071.138055   | 0.224971329      | 1.495344386   | 1.31781528  |
| Q6JB01    | TY-2482_chromosome | -      | 4088           | 5638         | 466.7521359 | 463.4118069  | 515.4787155  | 0             | 0             | 0             | 13.02976188      | 174.3701292   | 172.8085752 |
| Q9S110    | TY-2482_chromosome | -      | 4531           | 4899         | 1203.186407 | 1203.081851  | 1401.746222  | 1368.922556   | 1266.939963   | 1300.018434   | -0.019706053     | 0.171646649   | 0.138671571 |
| P71290    | TY-2482_chromosome | -      | 4817           | 5122         | 611.451021  | 587.4724483  | 704.9151192  | 734.1930559   | 729.2193146   | 728.7237637   | -0.165218713     | 1.105341676   | 0.960221647 |
| D3GUQ6    | TY-2482_chromosome | +      | 5035           | 5241         | 338.6641096 | 406.3609211  | 362.1653822  | 0             | 0             | 0             | 12.5807458       | 138.3201787   | 136.9029375 |
| B7LBU5    | TY-2482_chromosome | +      | 5193           | 5498         | 329.021009  | 400.9417201  | 364.9484463  | 540.821461    | 461.7675426   | 420.0528635   | -0.427101889     | 2.393575589   | 2.154089894 |
| D3GUQ5    | TY-2482_chromosome | +      | 5272           | 5496         | 351.8665486 | 449.0964344  | 388.0340948  | 0             | 0             | 0             | 12.66978289      | 140.836076    | 139.3978728 |
| Q9S110    | TY-2482_chromosome | -      | 5574           | 6008         | 788.2912412 | 731.452778   | 825.8754276  | 1080.949015   | 984.1255247   | 991.4503424   | -0.354012922     | 3.470910969   | 3.176443003 |
| Q6JB00    | TY-2482_chromosome | -      | 5652           | 6101         | 117.8049718 | 142.3184031  | 143.3975021  | 0             | 0             | 0             | 11.14980607      | 62.31061112   | 61.2797895  |
| D3GUQ4    | TY-2482_chromosome | +      | 5771           | 7318         | 476.9092552 | 583.5474435  | 517.3258567  | 0             | 0             | 0             | 13.08793613      | 181.409611    | 179.8252798 |
| P71290    | TY-2482_chromosome | -      | 5926           | 6231         | 612.8756088 | 622.3181968  | 622.1147683  | 911.6237402   | 981.4151358   | 882.6812551   | -0.583237499     | 7.371179012   | 6.933929269 |
| Q6JAZ9    | TY-2482_chromosome | -      | 6091           | 7383         | 516.8261209 | 511.4237611  | 504.3903101  | 0             | 0             | 0             | 13.09173226      | 185.9069005   | 184.3124296 |
| B7LB68    | TY-2482_chromosome | +      | 6302           | 7822         | 2367.978071 | 2284.166349  | 2268.718853  | 3403.421873   | 3378.340289   | 3194.301116   | -0.527012653     | 2.858179085   | 2.594473413 |
| Q83Z99    | TY-2482_chromosome | +      | 7347           | 7796         | 155.5311478 | 118.281567   | 150.6570803  | 0             | 0             | 0             | 11.30828593      | 65.55401896   | 64.49523087 |
| C7SA78    | TY-2482_chromosome | -      | 7379           | 9058         | 937.4322966 | 867.9626796  | 846.4844379  | 0             | 0             | 0             | 13.88841595      | 272.3309964   | 270.4900543 |
| Q327G0    | TY-2482_chromosome | +      | 7900           | 8397         | 333.935274  | 280.3718596  | 267.6953057  | 172.0900008   | 170.8794987   | 193.3318605   | 0.733041254      | 5.97342265    | 5.577695445 |
| C3VUZ6    | TY-2482_chromosome | +      | 7952           | 9223         | 177.5195812 | 193.2415971  | 189.604313   | 0             | 0             | 0             | 11.62879445      | 84.80092382   | 83.62898852 |
| B7LWW0    | TY-2482_chromosome | -      | 8595           | 8942         | 28186.6109  | 38933.05893  | 40171.79423  | 113.6054554   | 164.063859    | 153.1822894   | 7.938918235      | 58.70596036   | 57.70404217 |
| Q6JAZ7    | TY-2482_chromosome | -      | 9075           | 9509         | 117.9778095 | 93.43426757  | 102.1686687  | 0             | 0             | 0             | 10.84252834      | 51.09063347   | 50.14286729 |
| D3GUQ1    | TY-2482_chromosome | +      | 9219           | 11318        | 304.977511  | 419.5684599  | 353.522021   | 0             | 0             | 0             | 12.51441439      | 125.6780043   | 124.3121682 |
| P0CE57    | TY-2482_chromosome | +      | 9296           | 10276        | 539.2717859 | 475.968115   | 515.7775203  | 0             | 1.32853126    | 2.186557755   | 8.95344266       | 183.0181617   | 181.4304768 |
| C7SA80    | TY-2482_chromosome | -      | 9512           | 10576        | 337.8870955 | 332.8414894  | 310.605437   | 0             | 0             | 0             | 12.43893744      | 131.6159239   | 130.2251453 |
| B7LWW8    | TY-2482_chromosome | +      | 10854          | 11069        | 425.553747  | 608.794914   | 544.3640718  | 17.74606629   | 14.31928543   | 23.86821341   | 4.75826408       | 136.0257303   | 134.613013  |
| P16943    | TY-2482_chromosome | +      | 11255          | 12280        | 1452.761731 | 1389.178126  | 1322.06903   | 723.4830663   | 845.7508685   | 1019.49713    | 0.693291409      | 8.596461168   | 8.125559034 |
| Q6JAZ2    | TY-2482_chromosome | +      | 12052          | 12732        | 136.4070593 | 137.7675478  | 125.2724439  | 0             | 0             | 0             | 11.13516578      | 62.81144205   | 61.77403295 |
| B3HJU4    | TY-2482_chromosome | +      | 12594          | 14385        | 4343.243619 | 4516.867782  | 4683.581392  | 348.826047    | 437.1071257   | 461.4850676   | 3.451548559      | 76.10930627   | 74.98710304 |
| Q6JAZ1    | TY-2482_chromosome | -      | 12929          | 13519        | 179.3174151 | 168.2534339  | 113.1857863  | 0             | 0             | 0             | 11.30174567      | 62.66680188   | 61.63033999 |
| C8UMU7    | TY-2482_chromosome | +      | 14018          | 14524        | 71.13757197 | 97.74011197  | 105.6862934  | 0.961215948   | 10.31913789   | 12.11440555   | 3.582022605      | 32.59867139   | 31.79304785 |
| Q2VNV1    | TY-2482_chromosome | -      | 14169          | 14429        | 4453.479245 | 3666.984449  | 2893.228478  | 0             | 0             | 0             | 15.92231675      | 325.0237216   | 323.0330172 |
| B7LWV1    | TY-2482_chromosome | -      | 14363          | 14596        | 257.9768036 | 234.7404338  | 227.2882956  | 366.7867607   | 424.0322391   | 430.7714707   | -0.75345064      | 7.457559287   | 7.014742903 |
| B7LG70    | TY-2482_chromosome | +      | 14580          | 15236        | 247.1683376 | 245.5682919  | 255.6585016  | 0             | 0             | 0             | 12.06704508      | 107.9742474   | 106.7105418 |
| B7LWV0    | TY-2482_chromosome | -      | 14742          | 14987        | 326.6484429 | 307.9957471  | 330.360174   | 761.493886    | 840.9082795   | 898.6585881   | -1.349555956     | 28.99917539   | 28.2414173  |
| E1JE00    | TY-2482_chromosome | -      | 15109          | 15426        | 1370.629987 | 1418.282968  | 1571.398967  | 0             | 0             | 0             | 14.617990381     | 325.0237216   | 323.0330172 |
| B7LG74    | TY-2482_chromosome | +      | 15260          | 15565        | 154.4076771 | 168.4267558  | 139.7811103  | 0.04078769    | 0.083804035   | 4.146186387   | 6.81022692       | 70.26367874   | 69.17818802 |
| B7LWU9    | TY-2482_chromosome | +      | 15334          | 16494        | 828.777628  | 769.3817851  | 820.3238741  | 11.30631581   | 31.97510598   | 27.74556143   | 5.125048067      | 221.8386539   | 220.1181029 |
| C8TW44    | TY-2482_chromosome | +      | 15402          | 16430        | 1271.521072 | 983.4927229  | 1037.637267  | 268.3692827   | 273.1073637   | 279.0685562   | 2.043874843      | 62.52559448   | 61.49102083 |
| E3PN47    | TY-2482_chromosome | +      | 15519          | 15794        | 61.36933584 | 82.32841802  | 94.09309322  | 0             | 0             | 0             | 10.40352292      | 38.12323696   | 37.26757162 |
| Q6WPL3    | TY-2482_chromosome | +      | 16474          | 17115        | 25.80910382 | 23.31765165  | 23.12385833  | 122.979874    | 135.8242018   | 126.9490683   | -2.410399943     | 21.48043596   | 20.81235617 |

|               |                    |   |       |       |             |              |             |             |             |             |              |             |             |
|---------------|--------------------|---|-------|-------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LWU8</b> | TY-2482_chromosome | + | 16494 | 17729 | 1391.182705 | 1420.269669  | 1274.738064 | 6.749469724 | 21.75596723 | 9.507203909 | 6.726105622  | 325.0237216 | 323.0330172 |
| <b>E9LLT7</b> | TY-2482_chromosome | - | 16994 | 17278 | 151.4712945 | 178.2756575  | 148.2919849 | 0           | 0           | 0           | 11.35956728  | 71.37099452 | 70.276946   |
| <b>C7S9Z5</b> | TY-2482_chromosome | - | 17506 | 18012 | 1269.433597 | 1283.042071  | 1251.493677 | 0           | 0           | 0           | 14.39869843  | 325.0237216 | 323.0330172 |
| <b>B7LWU7</b> | TY-2482_chromosome | + | 17629 | 18447 | 1288.879213 | 1411.395795  | 1135.608089 | 26.60669936 | 62.25784583 | 56.43956774 | 4.684738777  | 203.1942765 | 201.5294257 |
| <b>Q68JD7</b> | TY-2482_chromosome | - | 18071 | 18670 | 1786.994005 | 2113.239857  | 2029.993878 | 0           | 0           | 0           | 15.01820843  | 325.0237216 | 323.0330172 |
| <b>B7LWU6</b> | TY-2482_chromosome | + | 18443 | 19069 | 773.1864847 | 727.6676091  | 662.7693075 | 19.75472572 | 54.65413604 | 44.71381206 | 4.188312758  | 138.7631456 | 137.3413329 |
| <b>E6AXF5</b> | TY-2482_chromosome | - | 18628 | 18849 | 263.9715256 | 318.1264965  | 293.0877068 | 0           | 0           | 0           | 12.24803142  | 116.2587315 | 114.951392  |
| <b>C7S9Z7</b> | TY-2482_chromosome | + | 18933 | 20366 | 1442.250078 | 1631.019558  | 1590.375291 | 0           | 0           | 0           | 14.67974066  | 325.0237216 | 323.0330172 |
| <b>B7LWU5</b> | TY-2482_chromosome | + | 19089 | 20297 | 534.9282776 | 560.1524576  | 543.1429497 | 10.4018143  | 20.96747076 | 18.21526447 | 5.038650736  | 191.3205326 | 189.6978049 |
| <b>D3QYQ9</b> | TY-2482_chromosome | + | 20378 | 20599 | 101.9779692 | 78.4898113   | 98.97135916 | 0           | 0           | 0           | 10.70059062  | 46.05813351 | 45.14661036 |
| <b>B7LFS5</b> | TY-2482_chromosome | + | 20550 | 21779 | 73.49631697 | 97.12253363  | 68.03990963 | 104.8516577 | 83.59914326 | 75.18055175 | -0.249726722 | 0.335044161 | 0.277449738 |
| <b>P03008</b> | TY-2482_chromosome | - | 20860 | 23652 | 1036.501632 | 898.4809954  | 966.9625888 | 0           | 0           | 0           | 14.04346175  | 286.0531281 | 284.1401834 |
| <b>B7LBV5</b> | TY-2482_chromosome | + | 21275 | 22405 | 475.0603922 | 581.5040575  | 463.0644203 | 1126.113061 | 1268.953621 | 1355.86519  | -1.366625935 | 27.62352388 | 26.87949182 |
| <b>E1U309</b> | TY-2482_chromosome | + | 21915 | 22609 | 145.904776  | 142.95673217 | 122.5975675 | 61.35946883 | 55.58912172 | 55.49549906 | 1.224719455  | 10.52233158 | 10.00618622 |
| <b>B7LFP0</b> | TY-2482_chromosome | - | 22521 | 24086 | 441.6848903 | 406.8599543  | 395.3644488 | 474.5537126 | 509.1768535 | 491.1773977 | -0.241174616 | 1.370528424 | 1.202965685 |
| <b>Q9LA20</b> | TY-2482_chromosome | + | 22628 | 23468 | 150.9168251 | 114.0633011  | 161.8386667 | 104.1066362 | 103.575835  | 104.0056872 | 0.537282366  | 2.057089967 | 1.839397177 |
| <b>A5JTS3</b> | TY-2482_chromosome | + | 23666 | 23995 | 4301.049893 | 4516.842822  | 4719.455265 | 0           | 0           | 0           | 16.23922182  | 325.0237216 | 323.0330172 |
| <b>Q6BBP7</b> | TY-2482_chromosome | - | 24048 | 24920 | 202193.0146 | 216104.6061  | 235393.4902 | 0           | 0           | 0           | 21.83936338  | 113.9447174 | 112.6546828 |
| <b>B7LA97</b> | TY-2482_chromosome | - | 24120 | 24467 | 282.5088866 | 253.0371764  | 268.7038239 | 257.8320046 | 241.3383628 | 261.6417599 | 0.102958825  | 0.275234686 | 0.226684296 |
| <b>B7LA98</b> | TY-2482_chromosome | - | 24467 | 24901 | 381.7999197 | 396.9572883  | 336.6720212 | 442.544858  | 415.8747497 | 455.0568236 | -0.270009992 | 1.267037459 | 1.10984265  |
| <b>C6UQD7</b> | TY-2482_chromosome | + | 24997 | 25194 | 677.4245327 | 634.3325629  | 615.1674205 | 76.28328641 | 82.34091747 | 82.01741863 | 3.003197749  | 108.7197481 | 107.4496084 |
| <b>D9Z5B6</b> | TY-2482_chromosome | - | 25179 | 26441 | 12515.69428 | 14213.49014  | 13646.02691 | 0           | 0           | 0           | 17.78989699  | 112.928158  | 111.9248567 |
| <b>B7LBW0</b> | TY-2482_chromosome | - | 25495 | 29586 | 22402.3952  | 23554.39591  | 23757.69026 | 138.1635778 | 186.1754218 | 174.2602172 | 7.128598594  | 57.55672195 | 56.56601754 |
| <b>D8AHZ6</b> | TY-2482_chromosome | + | 26082 | 27023 | 271.8220412 | 317.4373054  | 273.2288179 | 0           | 0           | 0           | 12.21708492  | 115.264593  | 113.9642585 |
| <b>C7S9E2</b> | TY-2482_chromosome | - | 26623 | 26997 | 183.037744  | 244.1504689  | 221.1510635 | 0           | 0           | 0           | 11.8009895   | 88.33586824 | 87.14679618 |
| <b>B7LWU0</b> | TY-2482_chromosome | + | 26915 | 27556 | 539.0457764 | 674.5360335  | 679.213108  | 1.621484969 | 0           | 0           | 10.82743072  | 197.3084911 | 197.3084911 |
| <b>P59697</b> | TY-2482_chromosome | - | 27147 | 27603 | 124.4084683 | 195.8738058  | 121.3923788 | 0           | 0           | 0           | 11.14980607  | 57.07396278 | 56.08917875 |
| <b>C8UQP5</b> | TY-2482_chromosome | + | 27742 | 28599 | 13772.27774 | 15786.8119   | 16191.66085 | 11.71344149 | 6.454385591 | 26.7239599  | 10.01420136  | 79.04134236 | 77.90297441 |
| <b>D3GX03</b> | TY-2482_chromosome | - | 28757 | 29109 | 267.5818433 | 230.6664517  | 233.0013937 | 90.35445289 | 97.57388926 | 112.499908  | 1.30701605   | 15.02729362 | 14.43452923 |
| <b>Q5I3K9</b> | TY-2482_chromosome | - | 29017 | 29682 | 359.2304256 | 346.3854036  | 367.7081511 | 150.8988943 | 123.4725982 | 144.2442203 | 1.371716759  | 21.7984493  | 21.12507069 |
| <b>C1J8J6</b> | TY-2482_chromosome | - | 29173 | 29796 | 4121.43668  | 5119.976145  | 5456.135996 | 0           | 0           | 0           | 16.34459159  | 251.5925327 | 249.823677  |
| <b>C1MF88</b> | TY-2482_chromosome | - | 29773 | 31311 | 1233.951773 | 1304.907493  | 1304.492384 | 0           | 0           | 0           | 14.41318201  | 325.0237216 | 323.0330172 |
| <b>A7ZH69</b> | TY-2482_chromosome | - | 29898 | 30533 | 322.2734018 | 378.6113123  | 330.650583  | 0           | 0           | 0           | 12.47716944  | 131.5306805 | 130.1420361 |
| <b>Q8Z1G9</b> | TY-2482_chromosome | - | 30003 | 31271 | 400.4143262 | 508.3621841  | 398.4026422 | 121.2887685 | 120.3676302 | 120.0911345 | 1.774971932  | 35.17503266 | 34.3436359  |
| <b>B7LX00</b> | TY-2482_chromosome | + | 31115 | 31978 | 140.2417319 | 154.7051899  | 156.4515585 | 10.36745727 | 5.901844357 | 5.547309074 | 4.33300576   | 70.67971583 | 69.59103567 |
| <b>Q6EMF3</b> | TY-2482_chromosome | - | 31274 | 31708 | 207.9582716 | 173.3875818  | 225.1096846 | 0           | 0           | 0           | 11.81942161  | 87.61497721 | 86.43125039 |
| <b>A7MPV8</b> | TY-2482_chromosome | - | 31298 | 32932 | 1215.719631 | 1163.111327  | 1224.033732 | 0           | 0           | 0           | 14.34086057  | 325.0237216 | 323.0330172 |
| <b>C1J8J3</b> | TY-2482_chromosome | - | 31708 | 32115 | 193.1762549 | 188.4720018  | 174.1442605 | 0           | 0           | 0           | 11.6183054   | 83.88756862 | 82.71821074 |
| <b>Q19NM8</b> | TY-2482_chromosome | - | 32935 | 33972 | 925.9010796 | 855.9429248  | 787.7645001 | 0           | 0           | 0           | 13.83279618  | 260.2246998 | 258.4349102 |
| <b>D3H5C8</b> | TY-2482_chromosome | + | 33211 | 33591 | 140.4143542 | 129.2378569  | 190.0743577 | 12.01734635 | 32.53370839 | 32.24481799 | 2.677725386  | 26.79073477 | 26.05624802 |
| <b>B7LWZ7</b> | TY-2482_chromosome | + | 33728 | 34255 | 81.19316686 | 108.9603073  | 55.72368774 | 98.57895829 | 135.7671057 | 130.6558942 | -0.71458462  | 1.964394686 | 1.752125296 |
| <b>Q19NM7</b> | TY-2482_chromosome | - | 34060 | 34698 | 1870.284104 | 1728.593247  | 1635.354276 | 0           | 0           | 0           | 14.86415863  | 325.0237216 | 323.0330172 |
| <b>E1U309</b> | TY-2482_chromosome | - | 34255 | 34938 | 406.4560397 | 446.1061299  | 382.5363312 | 833.7099113 | 855.5070143 | 888.2478683 | -1.099536685 | 19.88870426 | 19.32935977 |
| <b>P75012</b> | TY-2482_chromosome | - | 34698 | 35333 | 2626.19687  | 2374.979525  | 2468.384686 | 0           | 0           | 0           | 15.39674838  | 325.0237216 | 323.0330172 |
| <b>D3H556</b> | TY-2482_chromosome | + | 34979 | 39662 | 918.7510183 | 1019.897023  | 974.1184413 | 14.45484496 | 21.96997717 | 26.13352521 | 5.528349409  | 275.4023963 | 273.5492198 |
| <b>Q19NM5</b> | TY-2482_chromosome | - | 35359 | 36075 | 2217.048938 | 2347.389414  | 2118.026114 | 0           | 0           | 0           | 15.19095165  | 325.0237216 | 323.0330172 |
| <b>P75010</b> | TY-2482_chromosome | - | 36461 | 36925 | 596.2809158 | 526.7000959  | 597.5153614 | 0           | 0           | 0           | 10.30111547  | 201.3503066 | 201.3503066 |
| <b>C6UQE2</b> | TY-2482_chromosome | - | 36946 | 38151 | 788.2898522 | 762.7646304  | 795.8987482 | 0           | 0           | 0           | 13.71959365  | 258.6346106 | 256.8501499 |
| <b>C6UQE3</b> | TY-2482_chromosome | - | 38165 | 40233 | 1049.508554 | 835.5898906  | 1051.353797 | 0           | 0           | 0           | 14.09638106  | 265.8051511 | 263.9819378 |
| <b>D3H5D8</b> | TY-2482_chromosome | + | 38970 | 40931 | 136.7777106 | 135.4129327  | 150.5991106 | 0           | 1.406464301 | 1.567369576 | 7.297731397  | 67.44245852 | 66.37461182 |
| <b>C6UQE4</b> | TY-2482_chromosome | - | 40202 | 40972 | 258.1421836 | 207.2686579  | 266.8595243 | 0           | 0           | 0           | 12.09379163  | 101.1157563 | 99.88582901 |
| <b>B7LWY8</b> | TY-2482_chromosome | + | 40486 | 41043 | 964.6590971 | 1157.814637  | 1129.087049 | 460.9027349 | 447.5547972 | 458.9993871 | 1.223882231  | 29.85791347 | 29.08956845 |
| <b>C6UQE5</b> | TY-2482_chromosome | - | 40968 | 42107 | 229.5560108 | 180.7975913  | 165.8787458 | 0           | 0           | 0           | 11.69517519  | 80.57380237 | 79.42575615 |
| <b>B7LA98</b> | TY-2482_chromosome | + | 41272 | 41706 | 345.9509021 | 323.7411672  | 324.8366929 | 430.8663739 | 419.780572  | 448.1245086 | -0.375934556 | 2.690034812 | 2.433926321 |
| <b>C1J8T1</b> | TY-2482_chromosome | + | 41420 | 42136 | 83.6933248  | 115.2479451  | 94.92523287 | 0           | 0           | 0           | 10.63966002  | 45.68695522 | 44.77896581 |

|        |                    |   |       |       |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| D3GV17 | TY-2482_chromosome | + | 41706 | 41999 | 185.3053614 | 183.8461808 | 183.9463054 | 138.9931424 | 157.46187   | 135.4361927 | 0.355028041  | 1.605930794 | 1.418603166 |
| B7LXB6 | TY-2482_chromosome | + | 41950 | 42261 | 203.6584508 | 217.2733022 | 233.8865436 | 35.53470101 | 47.58070149 | 42.85975346 | 2.38545709   | 39.38729203 | 38.52470802 |
| C8UMS5 | TY-2482_chromosome | - | 42120 | 43184 | 195.4163854 | 144.0800298 | 147.0189612 | 0           | 0           | 0           | 11.47451774  | 71.14054322 | 70.04757369 |
| C1J8T0 | TY-2482_chromosome | + | 42136 | 42729 | 104.3820028 | 115.2886918 | 112.0279605 | 0           | 0           | 0           | 10.86931394  | 53.61414455 | 52.65226648 |
| D3H551 | TY-2482_chromosome | - | 42321 | 43889 | 3599.708055 | 3225.013394 | 3329.026108 | 0           | 0           | 0           | 15.83951108  | 325.0237216 | 323.0330172 |
| C7SA25 | TY-2482_chromosome | + | 42804 | 43691 | 233.3601099 | 183.6089667 | 209.8072506 | 0           | 0           | 0           | 11.85112179  | 90.36840577 | 89.16706084 |
| C8TNH3 | TY-2482_chromosome | + | 43498 | 44076 | 2010.228496 | 1819.600927 | 1912.330742 | 0           | 0           | 0           | 15.01920543  | 325.0237216 | 323.0330172 |
| C8TX27 | TY-2482_chromosome | + | 44079 | 45233 | 3609.100684 | 3086.28477  | 3051.963277 | 0           | 0           | 0           | 15.77840605  | 325.0237216 | 323.0330172 |
| C1J8S7 | TY-2482_chromosome | + | 44084 | 44854 | 315.5233113 | 342.0011793 | 313.3837562 | 0           | 0           | 0           | 12.40882293  | 129.4471128 | 128.060592  |
| C1J8H1 | TY-2482_chromosome | + | 44858 | 45214 | 101.0040499 | 109.5873412 | 103.5087483 | 0           | 0           | 0           | 10.7874174   | 51.06339336 | 50.11639789 |
| C8TX26 | TY-2482_chromosome | + | 45259 | 45711 | 1596.409244 | 1168.438762 | 1289.024302 | 0           | 0           | 0           | 14.54847134  | 305.6061472 | 303.6482353 |
| C1J8S5 | TY-2482_chromosome | + | 45319 | 45780 | 202.6816322 | 291.1953249 | 242.8546046 | 0           | 0           | 0           | 11.95896863  | 93.37489457 | 92.16657848 |
| P0CE57 | TY-2482_chromosome | - | 45664 | 46644 | 540.0183427 | 638.5174053 | 531.9429135 | 0           | 0           | 1.826246262 | 10.1485373   | 191.6966316 | 190.070239  |
| C8TX25 | TY-2482_chromosome | + | 45737 | 46774 | 4337.302957 | 3500.45375  | 3943.84109  | 0           | 0           | 0           | 16.08088439  | 325.0237216 | 323.0330172 |
| Q68J76 | TY-2482_chromosome | + | 45780 | 46691 | 2357.112536 | 2450.572214 | 2581.590247 | 0           | 0           | 0           | 15.3684714   | 325.0237216 | 323.0330172 |
| C8TW70 | TY-2482_chromosome | + | 46723 | 46959 | 892.8703024 | 966.694174  | 1022.656662 | 0           | 0           | 0           | 14.00673702  | 284.8737306 | 282.9678477 |
| Q79RI5 | TY-2482_chromosome | + | 46922 | 47173 | 668.188101  | 719.5813626 | 653.9374201 | 7.558034757 | 4.621432246 | 5.902685062 | 6.763468761  | 230.5051666 | 228.775375  |
| C1J8S2 | TY-2482_chromosome | - | 46996 | 47244 | 307.9692728 | 369.2239206 | 360.4368175 | 0           | 0           | 0           | 12.30590435  | 131.6838192 | 130.290896  |
| Q19NL2 | TY-2482_chromosome | + | 47268 | 48045 | 8809.35963  | 8639.724277 | 8833.010927 | 0           | 0           | 0           | 17.19963388  | 124.896301  | 123.536483  |
| C8URD0 | TY-2482_chromosome | + | 47481 | 47666 | 846.1254377 | 777.606737  | 685.8945347 | 380.0462346 | 429.0398034 | 361.3693906 | 0.965116739  | 15.59887418 | 14.99681418 |
| C8URD0 | TY-2482_chromosome | + | 47629 | 48306 | 382.4401599 | 411.1190143 | 430.7786832 | 0           | 0           | 0           | 12.77031929  | 153.9779317 | 152.494501  |
| C8TX21 | TY-2482_chromosome | + | 48479 | 49717 | 1272.305721 | 1120.762655 | 1229.787662 | 0           | 0           | 0           | 14.36532726  | 325.0237216 | 323.0330172 |
| D9Z504 | TY-2482_chromosome | - | 48762 | 49100 | 422.6873463 | 422.9038901 | 430.9919773 | 0           | 0           | 0           | 12.83289506  | 162.492627  | 160.9675387 |
| B7LWV0 | TY-2482_chromosome | + | 49217 | 49498 | 1038.111547 | 930.137936  | 934.087345  | 695.6709495 | 849.5539299 | 891.8815636 | 0.272902317  | 1.640534904 | 1.450385864 |
| C7SA35 | TY-2482_chromosome | + | 49328 | 49657 | 917.0502058 | 1008.684334 | 949.7568368 | 0           | 0           | 0           | 13.97831036  | 288.7720646 | 286.8519413 |
| B7LWX9 | TY-2482_chromosome | + | 49501 | 49773 | 882.5933985 | 809.9688315 | 945.0277276 | 440.16598   | 490.4592635 | 544.3416332 | 0.88330347   | 13.06014626 | 12.50175077 |
| C8TW76 | TY-2482_chromosome | + | 49671 | 52367 | 4133.243983 | 3941.271639 | 4239.656634 | 0           | 0           | 0           | 16.11858504  | 325.0237216 | 323.0330172 |
| D9Z536 | TY-2482_chromosome | + | 49782 | 50024 | 1022.831376 | 1105.144339 | 1140.558223 | 234.2924251 | 258.7973553 | 241.5750866 | 2.150958772  | 81.72475636 | 80.5717889  |
| B1VCJ6 | TY-2482_chromosome | - | 49986 | 50270 | 1141.113273 | 1155.754038 | 1160.877041 | 330.950563  | 320.9489148 | 311.4520959 | 1.840603011  | 70.89723704 | 69.80641749 |
| B7LWX4 | TY-2482_chromosome | + | 50759 | 51496 | 269.7926515 | 300.1532114 | 236.1989288 | 684.0834886 | 675.248439  | 753.1214883 | -1.443813483 | 25.97419106 | 25.24811932 |
| B7LWX3 | TY-2482_chromosome | - | 51781 | 52755 | 5983.271011 | 6206.279494 | 6621.632281 | 4272.272715 | 3739.363661 | 4232.955173 | 0.628469126  | 1.438082678 | 1.265630054 |
| C8TPC9 | TY-2482_chromosome | + | 52317 | 53099 | 122.001865  | 118.5054128 | 127.738539  | 0           | 2.680654034 | 9.015128198 | 5.165883988  | 60.83398893 | 59.81514225 |
| Q68J84 | TY-2482_chromosome | - | 52410 | 54698 | 861.5158528 | 924.5804731 | 813.5263665 | 0           | 0           | 0           | 13.82255286  | 265.36463   | 263.547169  |
| C8CGL3 | TY-2482_chromosome | - | 53068 | 53553 | 146.0685496 | 148.0989978 | 128.2718396 | 46.37321036 | 54.62590508 | 58.92076471 | 1.378166571  | 12.62598238 | 12.07507491 |
| B7LG82 | TY-2482_chromosome | + | 53074 | 54345 | 435.6289337 | 503.5500879 | 371.4098937 | 8.965195611 | 9.616657856 | 16.11347658 | 5.167872195  | 140.6109763 | 139.1775195 |
| D9Z540 | TY-2482_chromosome | + | 54052 | 54810 | 1834.174191 | 2190.838138 | 2104.687432 | 0           | 0           | 0           | 15.06482088  | 325.0237216 | 323.0330172 |
| C6UQI7 | TY-2482_chromosome | + | 54456 | 56852 | 177.696843  | 115.1874041 | 153.6902511 | 19.81881383 | 28.62180458 | 19.77789667 | 2.791954273  | 32.67565369 | 31.86835871 |
| D9Z502 | TY-2482_chromosome | - | 54694 | 55767 | 409.5247233 | 420.4890309 | 381.034269  | 0           | 0           | 0           | 12.73191473  | 152.7572504 | 151.2790839 |
| D8EV54 | TY-2482_chromosome | + | 54804 | 55199 | 194.1454972 | 176.4810839 | 140.1582119 | 0.76550644  | 3.268043015 | 2.317547103 | 6.257837983  | 74.09641567 | 72.98360183 |
| B7LX17 | TY-2482_chromosome | + | 55269 | 55544 | 552.5087186 | 549.5349157 | 520.3167198 | 335.1624643 | 324.928886  | 285.7548464 | 0.762879581  | 9.868375686 | 9.365170106 |
| B7LX16 | TY-2482_chromosome | + | 55522 | 55851 | 784.6039798 | 692.2115189 | 727.0783406 | 1150.606544 | 1222.13912  | 1148.012169 | -0.653487649 | 9.623523334 | 9.12719182  |
| C7SA39 | TY-2482_chromosome | - | 55783 | 56988 | 201.4046168 | 181.3411097 | 202.4570026 | 0           | 0           | 0           | 11.7345569   | 88.34979271 | 87.159374   |
| B7LX15 | TY-2482_chromosome | + | 55855 | 56658 | 983.6463369 | 734.0190492 | 771.9178229 | 1343.2794   | 1317.587842 | 1256.56222  | -0.614478957 | 7.704923589 | 7.258043862 |
| D3H584 | TY-2482_chromosome | + | 56807 | 57481 | 2116.256459 | 1997.775951 | 2241.036294 | 0           | 0           | 0           | 15.17314635  | 325.0237216 | 323.0330172 |
| C6UZH6 | TY-2482_chromosome | + | 56852 | 57754 | 143.5925281 | 114.0202745 | 106.8701645 | 5.061395972 | 7.102028987 | 14.67485665 | 3.796006252  | 45.722868   | 44.81276179 |
| C7SA40 | TY-2482_chromosome | - | 57346 | 58272 | 291.2761692 | 324.932696  | 298.9580273 | 0           | 0           | 0           | 12.32099624  | 123.0611097 | 121.7130832 |
| Q9Z4E6 | TY-2482_chromosome | + | 57571 | 57876 | 109.412364  | 1121.532361 | 1099.137357 | 0           | 0           | 0           | 14.19143253  | 325.0237216 | 323.0330172 |
| E9LLV1 | TY-2482_chromosome | + | 58239 | 59270 | 4158.081559 | 4449.641467 | 4597.34054  | 0           | 0           | 0           | 16.19909369  | 325.0237216 | 323.0330172 |
| C7SA41 | TY-2482_chromosome | + | 58610 | 58891 | 39632.28121 | 31855.82358 | 25816.22856 | 0           | 0           | 0           | 19.07317627  | 102.9264917 | 101.6876096 |
| B7L946 | TY-2482_chromosome | + | 58850 | 59638 | 115.6357987 | 125.9890008 | 117.897512  | 0           | 0.362469043 | 1.098375557 | 7.932572601  | 57.53575632 | 56.54590265 |
| Q3ZU22 | TY-2482_chromosome | + | 59266 | 59679 | 2304.928319 | 2372.034477 | 2374.89759  | 0           | 0           | 0.54619878  | 13.51716531  | 325.0237216 | 323.0330172 |
| D8EU26 | TY-2482_chromosome | + | 59524 | 59817 | 62834.65916 | 55364.8626  | 46966.05663 | 0           | 0           | 0           | 19.83104978  | 105.7126319 | 104.4615153 |
| C8TX14 | TY-2482_chromosome | + | 59657 | 60064 | 144.8010369 | 136.5994816 | 157.7491849 | 5.002427001 | 10.87381102 | 11.55800835 | 4.035577624  | 63.06238181 | 62.02116309 |
| C1J8J5 | TY-2482_chromosome | - | 59687 | 60958 | 685.0788648 | 871.0735501 | 751.5494832 | 100.3561864 | 90.59335034 | 80.40829634 | 3.02205547   | 103.9032892 | 102.6613807 |
| C8TX13 | TY-2482_chromosome | + | 60288 | 61106 | 106.2850104 | 89.605791   | 75.39133278 | 25.31164449 | 39.13669135 | 23.63976346 | 1.607117029  | 10.87886197 | 10.35435621 |

|               |                    |   |       |       |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>E9LLN8</b> | TY-2482_chromosome | - | 60554 | 61165 | 896.3409816 | 1058.288533 | 1041.441647 | 0           | 0           | 0           | 14.03855324  | 282.6001616 | 280.708067  |
| <b>A1YLB7</b> | TY-2482_chromosome | - | 60961 | 61398 | 189.2566408 | 166.668041  | 140.0604057 | 0           | 0           | 0           | 11.45106708  | 72.56631366 | 71.46573427 |
| <b>B3AEC6</b> | TY-2482_chromosome | - | 61244 | 63478 | 335.2892098 | 380.5305788 | 357.771317  | 0           | 0           | 0           | 12.55347737  | 138.459521  | 137.04      |
| <b>Q5K5L6</b> | TY-2482_chromosome | - | 61445 | 62401 | 337.1488422 | 392.2759261 | 390.5903099 | 21.64794457 | 31.43415647 | 24.640171   | 3.827955523  | 101.8106044 | 100.5777126 |
| <b>P46004</b> | TY-2482_chromosome | + | 62882 | 63637 | 6657.045597 | 9147.796503 | 8242.408439 | 0           | 0           | 0           | 17.00666033  | 220.2242425 | 218.5082391 |
| <b>E9TQB2</b> | TY-2482_chromosome | + | 63009 | 63588 | 93.14251936 | 74.01636771 | 63.8959709  | 49.72621375 | 57.21720381 | 58.23503337 | 0.488526056  | 1.528082635 | 1.348190373 |
| <b>C7SA45</b> | TY-2482_chromosome | - | 63509 | 64090 | 183.7025392 | 192.6453043 | 175.5102803 | 0           | 0           | 0           | 11.59709572  | 83.35477189 | 82.18797623 |
| <b>B7LX07</b> | TY-2482_chromosome | + | 63654 | 66179 | 15506.00309 | 24849.97563 | 22254.63713 | 0           | 0           | 0           | 18.36844155  | 103.6456502 | 102.4052575 |
| <b>C7SA46</b> | TY-2482_chromosome | - | 64122 | 65321 | 280.94856   | 257.9254868 | 268.7201321 | 0           | 0           | 0           | 12.18546003  | 113.8963769 | 112.6080354 |
| <b>C8TNM7</b> | TY-2482_chromosome | + | 64373 | 65212 | 120.1449307 | 112.7962494 | 116.4192861 | 0           | 0           | 0.54619878  | 9.196744444  | 57.35881024 | 56.37065303 |
| <b>D9Z526</b> | TY-2482_chromosome | - | 65291 | 65914 | 169.91563   | 154.9453848 | 129.9494412 | 0           | 0           | 0           | 11.32127817  | 68.26409273 | 67.19215852 |
| <b>B7LFE3</b> | TY-2482_chromosome | + | 65686 | 66621 | 2484.069895 | 2808.498463 | 2705.321201 | 1847.849091 | 1680.21916  | 1720.299863 | 0.584115964  | 7.268712033 | 6.834546613 |
| <b>Q68JA2</b> | TY-2482_chromosome | - | 65905 | 68946 | 620.5769533 | 568.9311063 | 583.4158794 | 0           | 0           | 0           | 13.31761719  | 208.8805886 | 207.1993473 |
| <b>B7LFE4</b> | TY-2482_chromosome | + | 66679 | 67413 | 2734.653624 | 3154.218183 | 3299.799508 | 2594.328875 | 2407.447553 | 2466.166818 | 0.291122915  | 1.128672357 | 0.981847779 |
| <b>O87745</b> | TY-2482_chromosome | + | 66734 | 67234 | 31264.25994 | 36158.36622 | 37413.55525 | 0           | 0           | 0           | 19.18006343  | 106.1205952 | 104.8663654 |
| <b>E9XTW5</b> | TY-2482_chromosome | + | 67374 | 67691 | 950.8171844 | 1007.875072 | 873.9358848 | 2.408960331 | 5.466795102 | 8.06440582  | 7.443236368  | 278.2271908 | 276.3484602 |
| <b>B7LFE5</b> | TY-2482_chromosome | + | 67440 | 67991 | 2040.399586 | 2308.893642 | 2268.484607 | 1991.785926 | 1917.581294 | 1832.469587 | 0.184455217  | 1.171605887 | 1.020982969 |
| <b>F2W481</b> | TY-2482_chromosome | - | 67666 | 67968 | 163.3123143 | 215.1986308 | 179.7413562 | 14.21193004 | 2.995303596 | 31.26478251 | 2.995303596  | 43.10151897 | 42.21213027 |
| <b>D3H139</b> | TY-2482_chromosome | + | 68048 | 68584 | 1163.304958 | 977.8505178 | 1126.265227 | 2507.3096   | 2760.27254  | 2862.980204 | -1.266470208 | 27.95775945 | 27.20740849 |
| <b>Q8XC14</b> | TY-2482_chromosome | + | 68195 | 68752 | 86.40080724 | 89.41438577 | 93.26039876 | 27.23215211 | 26.4588714  | 33.20434091 | 1.635075374  | 12.51240273 | 11.96427032 |
| <b>B7LFE7</b> | TY-2482_chromosome | - | 68654 | 69484 | 115.3626972 | 112.0766879 | 113.5432513 | 319.2219955 | 320.6435391 | 370.2571872 | -1.556793548 | 22.17855883 | 21.49898475 |
| <b>B7L938</b> | TY-2482_chromosome | + | 68805 | 70340 | 656.6161054 | 645.1836018 | 648.0164683 | 125.1332084 | 125.7562309 | 131.3348606 | 2.354007078  | 78.25407781 | 77.12462756 |
| <b>C7SA49</b> | TY-2482_chromosome | - | 69039 | 69836 | 193.6449723 | 218.3169829 | 188.4898227 | 0           | 0           | 0           | 11.70015709  | 87.68053378 | 86.49547681 |
| <b>C7SA51</b> | TY-2482_chromosome | - | 70075 | 70476 | 139.9403833 | 221.9364685 | 226.2760644 | 0           | 0           | 0           | 11.67000428  | 73.17048832 | 72.06327835 |
| <b>B7LFF0</b> | TY-2482_chromosome | - | 70349 | 70996 | 24.61486034 | 24.08921826 | 28.51055368 | 27.9749859  | 35.95508776 | 36.20675238 | -0.347035667 | 0.617451855 | 0.520911426 |
| <b>E3Y4T4</b> | TY-2482_chromosome | + | 70481 | 70994 | 174.7853728 | 218.6044506 | 210.9921921 | 31.69324628 | 39.40588666 | 27.89755871 | 2.570582149  | 40.34378026 | 39.47480946 |
| <b>C7SA52</b> | TY-2482_chromosome | - | 70530 | 71054 | 173.1971261 | 213.9827248 | 215.1926136 | 0           | 0           | 0           | 11.7248118   | 85.95881273 | 84.78167624 |
| <b>E9Z010</b> | TY-2482_chromosome | - | 70931 | 71380 | 243.9176234 | 245.0670234 | 249.95681   | 7.705744931 | 13.72116485 | 9.982843083 | 4.549814165  | 105.524111  | 104.2745427 |
| <b>C7SA53</b> | TY-2482_chromosome | - | 71057 | 71758 | 333.4583541 | 315.3931775 | 380.2508727 | 0           | 0           | 0           | 12.55897244  | 132.9850059 | 131.5855844 |
| <b>E9Z008</b> | TY-2482_chromosome | - | 71362 | 71859 | 120.8849623 | 154.7934538 | 128.0681955 | 0           | 0           | 0           | 11.1054318   | 60.7953902  | 59.77835686 |
| <b>C7SA54</b> | TY-2482_chromosome | - | 71761 | 73047 | 352.6798261 | 345.3439355 | 349.1607632 | 0           | 0           | 0           | 12.54796128  | 139.4969765 | 138.0658736 |
| <b>B7LFF2</b> | TY-2482_chromosome | + | 72246 | 72698 | 81.27936923 | 71.07725269 | 87.34884192 | 69.09034296 | 54.64178265 | 66.00129485 | 0.381463649  | 1.015348638 | 0.877697936 |
| <b>B7LWW9</b> | TY-2482_chromosome | + | 72295 | 73320 | 2638.443594 | 2811.494281 | 2999.589369 | 152.1486002 | 279.6967365 | 284.7267304 | 3.582025214  | 114.8260231 | 113.529149  |
| <b>B7LFF3</b> | TY-2482_chromosome | + | 72760 | 73089 | 6.930996585 | 12.70711893 | 8.685560366 | 43.74812292 | 64.23383092 | 67.94859956 | -2.73097058  | 11.74955307 | 11.21204706 |
| <b>C7SA55</b> | TY-2482_chromosome | - | 73053 | 74033 | 158.1409316 | 172.0377233 | 179.368254  | 0           | 0           | 0           | 11.50330499  | 77.75518682 | 76.62628616 |
| <b>C8U5K0</b> | TY-2482_chromosome | + | 73213 | 73520 | 30.762251   | 28.75810888 | 28.82902324 | 65.10272141 | 66.44209984 | 46.85476779 | -1.020244053 | 3.673580357 | 3.370107558 |
| <b>B7LWW8</b> | TY-2482_chromosome | + | 73327 | 73863 | 1851.870357 | 1913.819485 | 2246.449327 | 126.7172231 | 216.2367229 | 186.7476778 | 3.541163682  | 140.7833634 | 139.3475399 |
| <b>B7LFF5</b> | TY-2482_chromosome | + | 73618 | 74148 | 674.3516975 | 578.3522596 | 706.5050522 | 285.6451501 | 283.1232434 | 289.1416328 | 1.243933654  | 22.39733207 | 21.71483625 |
| <b>C7SA56</b> | TY-2482_chromosome | - | 74047 | 74736 | 166.4056465 | 118.2545701 | 139.5034557 | 0           | 0           | 0           | 11.30174567  | 64.35303693 | 63.30214532 |
| <b>B7LFF6</b> | TY-2482_chromosome | + | 74153 | 75571 | 927.2828953 | 1160.979544 | 1043.097649 | 460.675043  | 489.903772  | 462.5281361 | 1.099794116  | 24.05448444 | 23.3496461  |
| <b>B1LJZ9</b> | TY-2482_chromosome | + | 74681 | 75328 | 379.0854256 | 273.7154336 | 303.4390605 | 0           | 0           | 2.465873834 | 9.04738862   | 117.878477  | 116.5586004 |
| <b>C7SA58</b> | TY-2482_chromosome | - | 75101 | 78862 | 774.0813901 | 890.0687748 | 787.5389765 | 0           | 0           | 0           | 13.73059183  | 254.0831585 | 252.3091633 |
| <b>B7LFF7</b> | TY-2482_chromosome | - | 75585 | 76739 | 187.3413867 | 156.2481571 | 128.6889333 | 449.3786284 | 664.8160177 | 617.3062474 | -1.876449873 | 27.17078994 | 26.96530781 |
| <b>B7LFG0</b> | TY-2482_chromosome | + | 77133 | 78665 | 3476.425933 | 3372.482691 | 3267.320864 | 6941.931674 | 6804.725432 | 6782.259394 | -1.024234828 | 3.250186009 | 2.965546429 |
| <b>B7LFG1</b> | TY-2482_chromosome | + | 78661 | 81201 | 6781.781089 | 5753.382888 | 5820.482337 | 6568.996462 | 6366.719599 | 6086.882355 | -0.033014842 | 0.06256097  | 0.049580175 |
| <b>E9LLQ3</b> | TY-2482_chromosome | - | 78955 | 79863 | 249.6439058 | 213.8732036 | 212.9381319 | 0           | 0           | 0           | 11.92957518  | 97.25575792 | 96.03169961 |
| <b>C7SA62</b> | TY-2482_chromosome | - | 79808 | 80953 | 282.1241796 | 232.1466358 | 247.2913841 | 0           | 0           | 0           | 12.11632908  | 105.8363739 | 104.5837035 |
| <b>Q68JB5</b> | TY-2482_chromosome | - | 80953 | 81768 | 175.0048841 | 139.140869  | 163.7333115 | 0           | 0           | 0           | 11.46284006  | 73.21942322 | 72.11109824 |
| <b>Q0TJ23</b> | TY-2482_chromosome | + | 81213 | 81435 | 728.6942019 | 638.6455945 | 526.6821186 | 320.0931955 | 330.5221211 | 292.3397978 | 0.984754574  | 13.68848254 | 13.11989785 |
| <b>B7LFG2</b> | TY-2482_chromosome | + | 81377 | 81601 | 577.5047032 | 673.4977795 | 604.99958   | 299.7369527 | 324.56058   | 259.3659118 | 1.025910187  | 16.43879674 | 15.83007405 |
| <b>B7LFG3</b> | TY-2482_chromosome | - | 81608 | 81979 | 827.8503662 | 975.5065754 | 887.9470565 | 423.9771424 | 394.083893  | 343.1799263 | 1.163924368  | 24.49705162 | 23.78644331 |
| <b>Q68JB6</b> | TY-2482_chromosome | - | 81768 | 82223 | 138.6846127 | 108.7045084 | 102.5599345 | 0           | 0           | 0           | 10.97996044  | 54.72037182 | 53.75368601 |
| <b>B7LFG4</b> | TY-2482_chromosome | - | 82065 | 83288 | 394.281837  | 520.6999951 | 451.1942082 | 580.0441384 | 560.1865049 | 526.3086343 | -0.351102441 | 1.757090647 | 1.559189785 |
| <b>Q68JB8</b> | TY-2482_chromosome | - | 83265 | 84464 | 1021.057238 | 1061.573326 | 1108.974477 | 0           | 0           | 0           | 14.15561153  | 312.9446313 | 310.9706326 |
| <b>B7LFG5</b> | TY-2482_chromosome | - | 83463 | 84380 | 1977.603679 | 1774.840805 | 1813.30734  | 1632.154661 | 1548.548479 | 1592.886492 | 0.237079152  | 1.401681831 | 1.232323955 |

|               |                    |   |        |        |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>Q68JB9</b> | TY-2482_chromosome | - | 84553  | 85374  | 417.5359147 | 390.880754  | 403.764907  | 0           | 0           | 0           | 12.76794872  | 155.3584211 | 153.8723342 |
| <b>B7LFG6</b> | TY-2482_chromosome | + | 84605  | 85654  | 312.3581853 | 342.1263834 | 319.0599692 | 336.9996272 | 462.1665702 | 466.059212  | -0.392623566 | 2.163598508 | 1.938080381 |
| <b>P10487</b> | TY-2482_chromosome | - | 85528  | 86679  | 192.5597171 | 249.0854001 | 212.752284  | 0           | 0           | 0           | 11.80561965  | 89.84913172 | 88.6519164  |
| <b>B7LG46</b> | TY-2482_chromosome | - | 85702  | 86274  | 479.5877952 | 518.958371  | 455.762708  | 326.899687  | 362.5203409 | 329.4069326 | 0.478626537  | 4.387719194 | 4.053056597 |
| <b>B7LFF2</b> | TY-2482_chromosome | - | 86281  | 86844  | 138.3371606 | 135.4249131 | 149.2083683 | 113.0706796 | 122.3303635 | 115.4393598 | 0.287970884  | 0.964795267 | 0.831778034 |
| <b>B7LFF3</b> | TY-2482_chromosome | - | 87269  | 88384  | 1358.670703 | 1285.370858 | 1340.459764 | 1682.560505 | 1573.745015 | 1580.323849 | -0.267561577 | 2.219086342 | 2.199122256 |
| <b>B5YVT0</b> | TY-2482_chromosome | - | 88502  | 88756  | 2776.320075 | 2899.316541 | 2869.148067 | 3114.166249 | 3509.372391 | 3575.162368 | -0.257960943 | 0.774642203 | 0.660698851 |
| <b>B7LFF5</b> | TY-2482_chromosome | - | 89046  | 89420  | 526.9459977 | 580.7866886 | 541.7489018 | 602.2506697 | 553.8706415 | 607.8718479 | -0.120857356 | 0.431005856 | 0.359379548 |
| <b>B7LFF6</b> | TY-2482_chromosome | - | 89365  | 90408  | 1047.916732 | 952.0098308 | 949.8882791 | 1030.411256 | 1125.316222 | 1038.423037 | -0.10466718  | 0.553143246 | 0.464036043 |
| <b>B7LFF7</b> | TY-2482_chromosome | - | 90517  | 91074  | 780.1746696 | 772.7819571 | 774.4424615 | 1208.154551 | 1258.597281 | 1183.426493 | -0.648936814 | 9.565548075 | 9.071393481 |
| <b>B7LFF8</b> | TY-2482_chromosome | - | 91211  | 91855  | 2195.62467  | 2209.178441 | 1958.68765  | 1993.5638   | 1808.242802 | 1809.513448 | 0.154831887  | 0.960964216 | 0.828419427 |
| <b>B7LFF9</b> | TY-2482_chromosome | - | 91922  | 93127  | 536.1375031 | 440.7446202 | 565.6242485 | 376.1339418 | 324.8331838 | 323.283442  | 0.650563707  | 5.509409331 | 5.126265072 |
| <b>B7LG00</b> | TY-2482_chromosome | + | 93363  | 93944  | 1254.994441 | 1262.43518  | 1341.72171  | 1237.877626 | 1232.033034 | 1169.099252 | 0.093585658  | 0.415496452 | 0.345291648 |
| <b>B7LG02</b> | TY-2482_chromosome | + | 94607  | 95527  | 1400.708642 | 1306.841801 | 1284.649931 | 1778.908022 | 1689.884846 | 1797.904524 | -0.394322692 | 3.647417653 | 3.44993452  |
| <b>B7LG03</b> | TY-2482_chromosome | + | 95640  | 97172  | 477.5913516 | 491.170586  | 407.1633553 | 2040.570084 | 2172.295358 | 2281.499809 | -2.273319939 | 86.4229255  | 85.24316487 |
| <b>B7LG04</b> | TY-2482_chromosome | - | 97218  | 97631  | 637.0939817 | 669.3275445 | 583.7051791 | 8631.175859 | 8595.921838 | 9160.00227  | -3.832845062 | 30.67851858 | 29.89984502 |
| <b>B7LG05</b> | TY-2482_chromosome | - | 97639  | 97929  | 653.4847803 | 681.8320217 | 639.5190658 | 10086.46063 | 10202.74496 | 10405.63996 | -3.974259257 | 31.46413778 | 30.67755336 |
| <b>B7LG06</b> | TY-2482_chromosome | - | 98008  | 98664  | 176.0756174 | 225.4973963 | 175.6684798 | 1896.61613  | 1849.458472 | 1581.145449 | -3.289295904 | 122.6442902 | 121.300124  |
| <b>B7LG07</b> | TY-2482_chromosome | + | 98819  | 99232  | 274.9819326 | 279.1802171 | 301.4781861 | 8443.78127  | 7542.056361 | 7975.159045 | -4.796384258 | 82.75891874 | 81.59467027 |
| <b>B7LG08</b> | TY-2482_chromosome | + | 99239  | 99640  | 330.4952838 | 235.8259074 | 281.6843174 | 11620.06659 | 10481.50956 | 10755.30574 | -5.212899094 | 46.15243794 | 45.24020457 |
| <b>B7LG09</b> | TY-2482_chromosome | + | 99655  | 100347 | 489.4350667 | 505.4395482 | 507.1357194 | 21373.57476 | 19532.65069 | 18890.054   | -5.322167585 | 40.54425371 | 39.6739942  |
| <b>B7LG10</b> | TY-2482_chromosome | + | 100375 | 101577 | 825.5020301 | 774.2760358 | 801.7264003 | 34681.57927 | 31742.92559 | 30059.78239 | -5.319460276 | 36.83867354 | 35.994705   |
| <b>B7LG11</b> | TY-2482_chromosome | + | 101600 | 102352 | 409.2179508 | 354.3013537 | 392.1874994 | 19105.68835 | 18428.418   | 17418.69043 | -5.540813288 | 44.02416525 | 43.12729439 |
| <b>B7LG12</b> | TY-2482_chromosome | + | 102527 | 103306 | 358.3534992 | 321.9723708 | 273.6649742 | 16025.55278 | 15337.89783 | 14997.20038 | -5.620705357 | 45.70447257 | 44.79577871 |
| <b>B7LG13</b> | TY-2482_chromosome | + | 103362 | 104057 | 125.2028826 | 127.4769402 | 123.6479243 | 7918.066809 | 7669.985807 | 7467.645315 | -5.946592975 | 128.219925  | 126.8438697 |
| <b>B7LG14</b> | TY-2482_chromosome | + | 104072 | 105166 | 161.6708478 | 104.6964669 | 150.6047368 | 8678.572914 | 8507.152473 | 8220.825563 | -5.831424527 | 63.51688575 | 62.4689187  |
| <b>B7LG15</b> | TY-2482_chromosome | + | 105169 | 106107 | 126.7184092 | 123.0824135 | 123.6244103 | 6688.622861 | 6532.86244  | 6361.363295 | -5.710800096 | 120.2259026 | 118.894984  |
| <b>B7LG16</b> | TY-2482_chromosome | + | 106176 | 107816 | 1664.075387 | 1519.44343  | 1596.236013 | 54631.33937 | 49035.32703 | 48501.01781 | -4.977046528 | 31.57601281 | 30.78675909 |
| <b>B7LG17</b> | TY-2482_chromosome | + | 107831 | 108781 | 1142.505876 | 1132.97884  | 1079.196318 | 31011.02603 | 29329.70883 | 29343.72452 | -4.750597209 | 31.4407048  | 30.65465228 |
| <b>B7LG18</b> | TY-2482_chromosome | - | 108984 | 112166 | 16200.8506  | 13920.4532  | 14894.6574  | 29494.50888 | 27179.61621 | 26581.73587 | -0.860973867 | 1.893648417 | 1.686432725 |
| <b>C8TPF5</b> | TY-2482_chromosome | + | 112301 | 112618 | 2722.429022 | 2869.065738 | 2503.187535 | 3915.879807 | 4122.857825 | 3916.783099 | -0.595511791 | 2.476467945 | 2.232482264 |
| <b>B7LG19</b> | TY-2482_chromosome | + | 112739 | 113695 | 871.0734455 | 808.5229488 | 874.8693885 | 1920.741296 | 2074.926019 | 1870.676414 | -1.178079306 | 28.98573129 | 28.22847096 |
| <b>B5YVV6</b> | TY-2482_chromosome | - | 113813 | 114433 | 1144.272627 | 1107.439315 | 1170.838451 | 793.6544453 | 762.151963  | 811.7905634 | 0.546667711  | 6.863251429 | 6.442586066 |
| <b>sraB</b>   | TY-2482_chromosome | + | 114388 | 114556 | 5616.692804 | 5667.967986 | 4444.610913 | 2569.643053 | 3264.921381 | 2929.850279 | 0.800149137  | 4.537934942 | 4.196259801 |
| <b>B7LG21</b> | TY-2482_chromosome | + | 114593 | 115111 | 31138.01316 | 28856.76274 | 29565.12122 | 27755.12882 | 29174.98667 | 30807.28716 | 0.046475225  | 0.029471264 | 0.029330357 |
| <b>B7LG23</b> | TY-2482_chromosome | + | 115420 | 116487 | 7228.018076 | 7162.272117 | 7511.111428 | 7104.664136 | 8084.710217 | 7282.574796 | -0.026858111 | 0.042710853 | 0.033745135 |
| <b>B7LG24</b> | TY-2482_chromosome | + | 116558 | 117508 | 7885.281868 | 9042.494654 | 9229.28349  | 4776.30126  | 4009.157409 | 3539.433239 | 1.064524458  | 3.239438424 | 2.954966364 |
| <b>B7LG25</b> | TY-2482_chromosome | + | 117527 | 118453 | 12470.21068 | 13411.23497 | 14499.11065 | 8770.767966 | 8712.03391  | 8125.406797 | 0.661811802  | 1.313913829 | 1.151439544 |
| <b>B7LG26</b> | TY-2482_chromosome | + | 118469 | 119200 | 29842.7448  | 28034.71633 | 29379.67996 | 19749.46556 | 19445.45877 | 19578.65621 | 0.585776199  | 0.966517082 | 0.83290857  |
| <b>Q1RD63</b> | TY-2482_chromosome | - | 119363 | 119735 | 49609.97808 | 46144.63434 | 46282.98036 | 34671.79932 | 33985.66277 | 35832.66667 | 0.453155779  | 0.645560713 | 0.545748337 |
| <b>B7LG28</b> | TY-2482_chromosome | + | 119738 | 120976 | 20885.44403 | 19058.41724 | 20759.21579 | 19484.19003 | 19098.48378 | 18788.53059 | 0.106447222  | 0.088051944 | 0.069840795 |
| <b>B7LG29</b> | TY-2482_chromosome | + | 121099 | 121905 | 462.2240653 | 515.8477092 | 534.1970142 | 548.9030409 | 532.0824855 | 499.6121813 | -0.072353262 | 0.236615166 | 0.193767177 |
| <b>B7LG30</b> | TY-2482_chromosome | + | 121911 | 122930 | 703.3961446 | 682.3083761 | 608.1895042 | 937.2028523 | 1057.737502 | 1016.098262 | -0.61032314  | 7.326069147 | 6.890482914 |
| <b>B7LG31</b> | TY-2482_chromosome | + | 122923 | 123561 | 921.1252693 | 782.823057  | 880.6467059 | 1117.1363   | 1109.650121 | 984.6740249 | -0.278824351 | 2.314873888 | 2.081088859 |
| <b>B7LG32</b> | TY-2482_chromosome | + | 123561 | 124562 | 1296.676726 | 1116.226823 | 1274.232742 | 1453.729983 | 1413.917211 | 1196.684814 | -0.106877664 | 0.668588512 | 0.565589647 |
| <b>B7LG33</b> | TY-2482_chromosome | + | 124576 | 125370 | 1894.556039 | 1733.965459 | 1603.834907 | 1210.287447 | 1157.382727 | 1031.112572 | 0.612962867  | 8.177563116 | 7.716832277 |
| <b>B7LG34</b> | TY-2482_chromosome | + | 125668 | 127098 | 43839.9891  | 38763.94957 | 42468.24746 | 16890.77187 | 14157.82854 | 15411.7812  | 1.541117812  | 4.401890594 | 4.06286947  |
| <b>B7LG35</b> | TY-2482_chromosome | - | 127164 | 129350 | 352.0646274 | 341.6927967 | 270.8673933 | 284.3076868 | 274.0064447 | 313.9619383 | 0.110646967  | 0.467857564 | 0.389510697 |
| <b>B7LG36</b> | TY-2482_chromosome | + | 129684 | 130040 | 2220.006999 | 1998.343027 | 2212.436914 | 2223.883653 | 2107.434006 | 2198.8087   | 0.008239492  | 0.065327262 | 0.051538978 |
| <b>B7LG37</b> | TY-2482_chromosome | + | 130046 | 130420 | 2194.626735 | 1656.511108 | 1786.148881 | 2223.830962 | 2175.996427 | 2177.522642 | -0.178208738 | 1.177688325 | 1.026449648 |
| <b>B7LG38</b> | TY-2482_chromosome | + | 130437 | 131075 | 2754.061475 | 2249.016842 | 2336.392617 | 3358.445904 | 3179.223976 | 3156.65289  | -0.373484436 | 1.747998679 | 1.550783365 |
| <b>B7LG39</b> | TY-2482_chromosome | + | 131059 | 131880 | 1386.540224 | 1421.754588 | 1393.689027 | 1516.851569 | 1449.161599 | 1460.685771 | -0.083107741 | 0.347581804 | 0.287996114 |
| <b>B7LG40</b> | TY-2482_chromosome | + | 131894 | 132916 | 2597.972518 | 2953.715811 | 2975.259698 | 2800.755183 | 2495.411771 | 2630.554642 | 0.09069799   | 0.276022931 | 0.227375241 |
| <b>B7LG41</b> | TY-2482_chromosome | + | 132942 | 133481 | 3748.614486 | 4236.466207 | 4131.951694 | 4594.430619 | 4018.935234 | 4312.367499 | -0.113728562 | 0.175993205 | 0.142266591 |
| <b>B7LG42</b> | TY-2482_chromosome | + | 133892 | 135193 | 5528.575519 | 6464.04677  | 6459.311772 | 2089.401428 | 3397.029848 | 2469.013129 | 1.198461434  | 4.166561458 | 3.842851942 |

|               |                    |   |        |        |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LG43</b> | TY-2482_chromosome | + | 135406 | 135942 | 195.2854377 | 236.8367366 | 177.2900568 | 194.5084162 | 293.6494309 | 254.2506621 | -0.356479024 | 1.072093887 | 0.930363019  |
| <b>D3H1S7</b> | TY-2482_chromosome | - | 136010 | 136717 | 679.4334948 | 740.1256895 | 619.6949069 | 321.5052057 | 329.018328  | 322.6503044 | 1.02254357   | 18.61478854 | 17.97796644  |
| <b>B7LG45</b> | TY-2482_chromosome | + | 136880 | 137134 | 258.70868   | 252.9146656 | 289.8583836 | 248.6085518 | 299.0944086 | 355.1060571 | -0.132906273 | 0.568052496 | 0.477125696  |
| <b>B7LG47</b> | TY-2482_chromosome | - | 137223 | 138182 | 448.1783166 | 397.4582727 | 413.8907079 | 175.1808285 | 202.3783222 | 177.4263204 | 1.20170151   | 18.36204257 | 17.72897412  |
| <b>B7LG48</b> | TY-2482_chromosome | - | 138329 | 141772 | 3312.469017 | 3436.912899 | 3152.452119 | 2390.261881 | 2254.188058 | 2028.308123 | 0.542732258  | 3.188933321 | 2.9076631917 |
| <b>B7LG49</b> | TY-2482_chromosome | - | 141903 | 142973 | 40.73455065 | 43.45380009 | 40.3299164  | 25.35926109 | 26.42102397 | 26.73125897 | 0.641590329  | 1.776800352 | 1.577662769  |
| <b>B7LG50</b> | TY-2482_chromosome | + | 143235 | 144431 | 1439.915289 | 1352.258884 | 1418.037294 | 2052.488646 | 1991.533579 | 1833.254603 | -0.469358067 | 5.014952851 | 4.651734794  |
| <b>B7LG51</b> | TY-2482_chromosome | + | 144427 | 145125 | 1154.152617 | 1145.93041  | 1213.887941 | 951.5221024 | 807.9718278 | 718.7345588 | 0.506148333  | 5.218133348 | 4.847422031  |
| <b>B7LG52</b> | TY-2482_chromosome | + | 145128 | 146369 | 2498.342247 | 2577.434866 | 2565.998015 | 1691.382974 | 1690.05781  | 1452.306039 | 0.650809114  | 8.494008827 | 8.02592763   |
| <b>B7LG53</b> | TY-2482_chromosome | + | 146401 | 147309 | 2893.266049 | 2840.894062 | 3071.524401 | 1688.043959 | 1611.554156 | 1620.426802 | 0.855414578  | 9.799353567 | 9.2980469    |
| <b>B7LG54</b> | TY-2482_chromosome | + | 147328 | 148146 | 2363.786418 | 2381.24518  | 2851.283846 | 1640.303371 | 1512.42264  | 1537.528642 | 0.727955994  | 8.919862073 | 8.440647828  |
| <b>D6HVG4</b> | TY-2482_chromosome | - | 148291 | 149534 | 316.6820762 | 367.7902155 | 232.4168344 | 254.124873  | 306.6529511 | 307.8754282 | -0.020915844 | 0.146097689 | 0.117604727  |
| <b>B7LG57</b> | TY-2482_chromosome | - | 149595 | 150638 | 7066.345102 | 5800.153215 | 6552.900092 | 5713.906188 | 5714.087631 | 5993.427288 | 0.202371364  | 0.217041754 | 0.176778574  |
| <b>B7LG58</b> | TY-2482_chromosome | - | 150638 | 151429 | 1181.769742 | 1194.896259 | 1215.43266  | 992.2554006 | 1079.291824 | 937.3459715 | 0.254920153  | 1.92830199  | 1.719376147  |
| <b>D3H1U1</b> | TY-2482_chromosome | - | 151429 | 152283 | 547.6364824 | 574.5242067 | 488.95385   | 1106.91968  | 1103.111795 | 906.1202429 | -0.994995966 | 15.66820419 | 15.06509897  |
| <b>B7LG60</b> | TY-2482_chromosome | - | 152270 | 153403 | 759.2127654 | 756.9626439 | 801.5428513 | 2820.470839 | 3341.045898 | 3092.36314  | -1.983972212 | 62.46679113 | 61.43315853  |
| <b>B7LG61</b> | TY-2482_chromosome | - | 153385 | 153633 | 199.970652  | 163.5930618 | 230.6275176 | 401.956789  | 538.830805  | 479.2911403 | -1.173589286 | 15.03183851 | 14.43873336  |
| <b>B7LGW6</b> | TY-2482_chromosome | + | 153611 | 154879 | 5242.105948 | 5401.036779 | 5815.605639 | 7274.001534 | 5839.471733 | 6127.367057 | -0.21945575  | 0.33809462  | 0.280102673  |
| <b>B7LGQ6</b> | TY-2482_chromosome | - | 155031 | 156149 | 3505.938222 | 3407.498665 | 3639.094627 | 4028.197041 | 4039.199099 | 3905.70701  | -0.167677984 | 0.472132855 | 0.393271572  |
| <b>B7LGQ7</b> | TY-2482_chromosome | - | 156228 | 157685 | 3597.213866 | 3815.830252 | 3808.713031 | 3038.545239 | 3098.48935  | 2975.279112 | 0.29241968   | 0.944902244 | 0.814006975  |
| <b>B7LGQ8</b> | TY-2482_chromosome | - | 157688 | 158356 | 3338.804719 | 3702.3733   | 3406.634873 | 2016.062002 | 1959.548209 | 1886.8459   | 0.802813627  | 6.302186634 | 5.895502883  |
| <b>B7LGQ9</b> | TY-2482_chromosome | - | 158527 | 159894 | 3139.345433 | 2773.319075 | 2534.935485 | 1736.846092 | 1762.318284 | 1481.715679 | 0.754874911  | 9.845372259 | 9.342702062  |
| <b>D3H1U9</b> | TY-2482_chromosome | - | 159901 | 160545 | 1055.330743 | 806.0953476 | 862.3348023 | 2204.796282 | 2296.569372 | 1914.952069 | -1.199336314 | 22.57816975 | 21.89188829  |
| <b>B7LGR1</b> | TY-2482_chromosome | - | 160578 | 161681 | 2085.88883  | 1649.64227  | 1720.081834 | 6497.489209 | 7116.122479 | 6503.591838 | -1.848921718 | 11.34363424 | 10.81119729  |
| <b>B7LGR2</b> | TY-2482_chromosome | - | 161738 | 162196 | 592.6921533 | 499.0760627 | 544.5746931 | 762.0483159 | 750.8712633 | 663.2979079 | -0.381955141 | 3.323976581 | 3.035804081  |
| <b>B7LGR3</b> | TY-2482_chromosome | - | 162209 | 162859 | 679.2995156 | 687.5968122 | 632.4474136 | 938.7251097 | 1006.52818  | 926.5038581 | -0.540652003 | 6.231111223 | 5.827082363  |
| <b>Q1RD17</b> | TY-2482_chromosome | - | 162950 | 164128 | 55157.97497 | 57204.62325 | 61257.59461 | 28433.8237  | 28587.54186 | 23975.99133 | 1.103237287  | 2.504300667 | 2.25796596   |
| <b>B7LGR5</b> | TY-2482_chromosome | - | 164387 | 164707 | 243.5528237 | 238.2925946 | 218.7061625 | 41.90956909 | 68.68592672 | 69.80775084 | 1.955116392  | 26.8617991  | 26.12589386  |
| <b>B7LGR6</b> | TY-2482_chromosome | - | 165406 | 165807 | 5.420156051 | 7.022244413 | 11.04384201 | 45.02884811 | 69.98507624 | 81.29690179 | -2.998557173 | 14.77839709 | 14.19138503  |
| <b>B7LGR7</b> | TY-2482_chromosome | - | 166031 | 166759 | 863.7124412 | 971.0557522 | 996.8368867 | 1212.540908 | 1304.983833 | 1371.346273 | -0.461457674 | 4.923139482 | 4.563922995  |
| <b>B7LGR8</b> | TY-2482_chromosome | - | 166967 | 168175 | 243.8349933 | 272.5777134 | 217.4702189 | 407.1133371 | 541.2416583 | 497.8322836 | -1.02902081  | 10.9406491  | 10.4155608   |
| <b>B7LGR9</b> | TY-2482_chromosome | + | 168489 | 168722 | 28.51109947 | 19.79588101 | 20.43944628 | 26.01893683 | 44.71915131 | 45.85707279 | -0.713388871 | 1.741181262 | 1.544376757  |
| <b>B7LGS0</b> | TY-2482_chromosome | + | 168768 | 169037 | 17.83073542 | 14.14557702 | 18.55379958 | 8.305052684 | 24.77691773 | 20.70858613 | -0.021882051 | 0.063025599 | 0.049921894  |
| <b>B7LGS3</b> | TY-2482_chromosome | + | 170028 | 171548 | 39.73936904 | 42.02335603 | 56.76449887 | 40.75107508 | 50.5631551  | 65.63212904 | -0.122418909 | 0.279063654 | 0.230026549  |
| <b>D3H1W3</b> | TY-2482_chromosome | + | 171647 | 171898 | 219.9506528 | 198.0172762 | 147.5212733 | 88.27152039 | 119.778544  | 115.4372374 | 0.775041215  | 4.735780832 | 4.348306271  |
| <b>B7LGS8</b> | TY-2482_chromosome | + | 172627 | 174945 | 62.5716388  | 58.63000911 | 41.03288289 | 114.4901143 | 154.7812797 | 195.7932498 | -1.549631559 | 9.819059023 | 9.316960632  |
| <b>B7LGS9</b> | TY-2482_chromosome | - | 175008 | 175334 | 1635.436533 | 1651.916881 | 1821.449881 | 190.4909962 | 196.3478818 | 242.5953748 | 3.04660653   | 147.3577301 | 145.9000048  |
| <b>B7LGT0</b> | TY-2482_chromosome | - | 175347 | 175688 | 1552.778501 | 1645.664784 | 1822.783644 | 173.1425007 | 161.1571427 | 218.3606414 | 3.205680529  | 152.303262  | 150.8277039  |
| <b>B7LGT2</b> | TY-2482_chromosome | - | 176983 | 177246 | 2150.344516 | 2030.79437  | 2238.224936 | 3127.113827 | 2836.63106  | 2939.899974 | -0.449085992 | 2.372824544 | 2.13439461   |
| <b>B7LGT3</b> | TY-2482_chromosome | - | 177253 | 178062 | 7312.627871 | 7251.777867 | 7874.478125 | 10232.68948 | 9289.894842 | 9259.413867 | -0.345528093 | 0.57962043  | 0.487404602  |
| <b>B7LGT4</b> | TY-2482_chromosome | - | 178089 | 178781 | 4216.324894 | 4360.539658 | 4313.08035  | 5093.095156 | 4737.605114 | 4722.393504 | -0.183466731 | 0.264144821 | 0.217535849  |
| <b>D6J9E0</b> | TY-2482_chromosome | + | 178921 | 179145 | 40.49227541 | 32.24335626 | 41.48316684 | 60.3936002  | 72.02294773 | 71.57602762 | -0.776961666 | 3.073903134 | 2.798874432  |
| <b>B7LGT5</b> | TY-2482_chromosome | + | 179301 | 179666 | 384.4982107 | 479.2740657 | 459.5687144 | 299.2514182 | 332.612999  | 318.106833  | 0.446580183  | 3.54224282  | 3.243304577  |
| <b>B7LGT6</b> | TY-2482_chromosome | - | 179792 | 180190 | 1803.451812 | 1601.655604 | 1523.33995  | 337.9947583 | 390.3805992 | 409.7310038 | 2.124943906  | 80.89043757 | 79.74116626  |
| <b>D3QQU1</b> | TY-2482_chromosome | + | 180219 | 180417 | 44.83165886 | 62.83997612 | 60.0607657  | 81.59680071 | 84.79430456 | 104.3817469 | -0.724486429 | 2.712464581 | 2.455256411  |
| <b>B7LGT7</b> | TY-2482_chromosome | + | 180399 | 180722 | 751.863466  | 898.1843315 | 937.7696836 | 702.5336463 | 683.2153174 | 753.4997305 | 0.266717549  | 1.844933791 | 1.641509236  |
| <b>B7LGT8</b> | TY-2482_chromosome | + | 180797 | 181453 | 1770.129969 | 1719.074867 | 1879.021453 | 1850.004865 | 1751.187445 | 1823.585729 | 0.004751792  | 0.04460498  | 0.034461601  |
| <b>D8BP59</b> | TY-2482_chromosome | + | 181470 | 181991 | 636.9290946 | 611.7477483 | 596.4295633 | 744.1044492 | 782.0075389 | 853.9910033 | -0.362885102 | 3.121785888 | 2.844127082  |
| <b>B5YK6</b>  | TY-2482_chromosome | - | 182204 | 183255 | 25.64342207 | 44.87415789 | 42.6521173  | 31.58242066 | 38.68550442 | 53.79244933 | -0.176380462 | 0.176769438 | 0.142854736  |
| <b>B7LGU3</b> | TY-2482_chromosome | + | 183484 | 183900 | 187.7018311 | 162.2726132 | 145.6655277 | 111.3084956 | 90.70337051 | 109.8321869 | 0.665967977  | 3.838222768 | 3.528582161  |
| <b>B7LGU4</b> | TY-2482_chromosome | + | 183903 | 185168 | 298.1249121 | 357.3555078 | 334.7099416 | 256.429573  | 218.1899229 | 221.5933208 | 0.470187443  | 3.457938476 | 3.164497616  |
| <b>B5YK9</b>  | TY-2482_chromosome | - | 185220 | 185753 | 567.4965605 | 619.5118518 | 567.683406  | 1157.516486 | 1245.863022 | 1285.634805 | -1.095716136 | 23.04531545 | 22.35350691  |
| <b>B7LGU6</b> | TY-2482_chromosome | - | 185896 | 187434 | 1762.443083 | 1324.106418 | 1517.28792  | 2713.381208 | 2604.181622 | 2348.778803 | -0.685396893 | 8.67227989  | 8.199831305  |
| <b>B7LGU7</b> | TY-2482_chromosome | + | 187656 | 188372 | 2131.383097 | 2354.38293  | 2389.096614 | 2806.96027  | 2484.640871 | 2433.190134 | -0.181033003 | 0.505077784 | 0.421911195  |
| <b>B7LGU8</b> | TY-2482_chromosome | - | 188430 | 189959 | 3124.021281 | 3024.637581 | 3302.827905 | 805.1136657 | 808.887889  | 694.5313305 | 2.048468412  | 69.71725815 | 68.63598391  |

|        |                    |   |        |        |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7LGU9 | TY-2482_chromosome | + | 190289 | 191584 | 1523.574834 | 1634.340308 | 1808.398514 | 1128.253307 | 1032.526085 | 792.4677992 | 0.750292358  | 9.527082361 | 9.034012148 |
| B7LGV0 | TY-2482_chromosome | + | 191597 | 192664 | 1745.413396 | 1710.701036 | 1606.544512 | 1154.947027 | 1151.086536 | 885.6246644 | 0.646712281  | 8.571237371 | 8.100849499 |
| B7LGV1 | TY-2482_chromosome | - | 193056 | 194789 | 4170.101744 | 3680.685766 | 3767.284424 | 6598.936808 | 6404.926425 | 6071.657679 | -0.699697878 | 1.807908154 | 1.606701513 |
| B7LGV2 | TY-2482_chromosome | - | 194887 | 195798 | 557.8200964 | 521.9878978 | 657.3829882 | 578.8381845 | 511.2631895 | 489.3697059 | 0.181768556  | 0.630186409 | 0.53197609  |
| A1YN12 | TY-2482_chromosome | + | 195784 | 196506 | 383.8434451 | 385.0335813 | 417.85051   | 1170.075138 | 1128.092388 | 1128.280158 | -1.515121128 | 43.26756413 | 42.37682458 |
| B7LGV4 | TY-2482_chromosome | - | 196514 | 197245 | 182.9439196 | 148.6156765 | 156.8235819 | 3372.692481 | 3380.503007 | 3138.539732 | -4.311583756 | 205.4265012 | 203.7576104 |
| A7ZKW7 | TY-2482_chromosome | - | 197503 | 197769 | 102.9998256 | 120.343868  | 119.0794539 | 28.39942196 | 30.62253986 | 41.95123615 | 1.75129116   | 15.84539031 | 15.24123733 |
| B7LGV6 | TY-2482_chromosome | + | 197878 | 198315 | 27.05614103 | 47.65074084 | 37.28896836 | 46.10041056 | 59.0113134  | 49.49368682 | -0.563183695 | 1.076695837 | 0.934603107 |
| B7LGV7 | TY-2482_chromosome | - | 198400 | 200094 | 710.5157197 | 785.3287377 | 697.0746828 | 928.0273765 | 959.7721876 | 920.1537523 | -0.392170741 | 3.232964664 | 2.949162037 |
| B7LGV8 | TY-2482_chromosome | - | 200417 | 201832 | 3766.90249  | 3193.111315 | 3387.939774 | 12014.47132 | 11001.72474 | 12014.7557  | -1.729303728 | 7.380262204 | 6.750097357 |
| B7LGV9 | TY-2482_chromosome | - | 201846 | 202475 | 3148.412347 | 2964.980238 | 3424.798496 | 6956.310168 | 6374.194397 | 7202.985734 | -1.070477543 | 3.702606071 | 3.397379961 |
| B7LGW0 | TY-2482_chromosome | - | 202489 | 203556 | 5692.135931 | 5822.2097   | 5889.114526 | 8696.799696 | 7633.869011 | 8236.703514 | -0.499040804 | 0.952364092 | 0.820762653 |
| B7LGW1 | TY-2482_chromosome | + | 203784 | 205700 | 679.3092347 | 604.9782282 | 712.307778  | 786.0420679 | 681.686925  | 761.5847308 | -0.117248098 | 0.747959897 | 0.63694717  |
| B7LGW2 | TY-2482_chromosome | - | 205806 | 208670 | 331.3933274 | 332.059429  | 300.6128727 | 684.2078559 | 752.9014406 | 766.3057811 | -1.207827481 | 22.2287574  | 21.54793355 |
| B7LGW3 | TY-2482_chromosome | - | 209442 | 210530 | 3378.862073 | 3119.226126 | 3277.189161 | 5851.687529 | 6079.952035 | 5617.754665 | -0.827707261 | 2.433095726 | 2.191339008 |
| B7LGW4 | TY-2482_chromosome | - | 210650 | 211231 | 382.1608774 | 428.9249503 | 365.2811672 | 758.8170819 | 764.8735641 | 779.9423022 | -1.013104396 | 16.11571848 | 15.50840698 |
| B7LGW5 | TY-2482_chromosome | + | 211509 | 211784 | 1738.425748 | 2102.588225 | 2105.955709 | 1854.537449 | 1706.997612 | 1505.187581 | 0.203226041  | 1.268619264 | 1.111174502 |
| B7LGW7 | TY-2482_chromosome | - | 211845 | 213521 | 1277.127514 | 1248.442141 | 1090.989156 | 2178.24531  | 2213.510293 | 2137.859961 | -0.875624591 | 13.7315137  | 13.16196141 |
| B7LGW8 | TY-2482_chromosome | - | 213649 | 214593 | 12496.47709 | 10647.44748 | 10675.216   | 9425.211157 | 9388.501917 | 8564.066751 | 0.320422643  | 0.450773923 | 0.376265346 |
| B7LGW9 | TY-2482_chromosome | - | 214747 | 215595 | 5992.3353   | 5326.141027 | 5854.594401 | 4317.8409   | 4105.091716 | 4500.487358 | 0.442662687  | 0.790296078 | 0.674879963 |
| B7LGX0 | TY-2482_chromosome | - | 215598 | 216218 | 1433.426871 | 1373.548288 | 1392.256011 | 1463.348037 | 1363.29774  | 1242.924803 | 0.046965495  | 0.183808183 | 0.148668921 |
| B7LGX1 | TY-2482_chromosome | + | 216432 | 217685 | 4601.220477 | 4373.261671 | 4515.65832  | 8075.578049 | 8622.267142 | 8541.077456 | -0.890273799 | 2.452361388 | 2.258245014 |
| B7LGX2 | TY-2482_chromosome | + | 217730 | 218809 | 2628.294333 | 2623.094941 | 2703.860989 | 5946.352773 | 6221.509718 | 5430.62138  | -1.142998874 | 4.910638135 | 4.502212341 |
| B7LGX3 | TY-2482_chromosome | + | 218812 | 219642 | 1124.152207 | 986.1175234 | 993.0218773 | 2649.365138 | 2622.283188 | 2384.784008 | -1.29046137  | 29.09770772 | 28.33795287 |
| B7LGX4 | TY-2482_chromosome | + | 219642 | 220031 | 500.6234576 | 424.1796134 | 564.0035494 | 1025.428447 | 993.7784149 | 1066.435943 | -0.981377373 | 18.39535162 | 17.76153503 |
| B7LGX5 | TY-2482_chromosome | + | 220038 | 220844 | 1645.032402 | 1651.109171 | 1731.126078 | 2721.243871 | 2742.925463 | 2783.048984 | -0.70473979  | 10.0786178  | 9.569612712 |
| Q8FHZ9 | TY-2482_chromosome | - | 220847 | 221806 | 7333.519177 | 7046.195735 | 7409.149456 | 7199.789356 | 6914.183371 | 6930.021844 | 0.063022576  | 0.059260205 | 0.047264307 |
| Q1RCM2 | TY-2482_chromosome | + | 221748 | 222008 | 508.2404672 | 422.1659306 | 482.6691479 | 124.3090228 | 135.8832116 | 179.9070578 | 1.738609038  | 30.156511   | 29.38457887 |
| C1NCG3 | TY-2482_chromosome | + | 222307 | 222543 | 42.53731913 | 34.13154512 | 53.93732358 | 55.35390418 | 57.56120804 | 42.90966299 | -0.17535424  | 0.450378272 | 0.376076208 |
| C1NCG3 | TY-2482_chromosome | + | 222842 | 223078 | 104.1607001 | 101.8025575 | 110.4750827 | 148.8613694 | 138.4882102 | 153.9881344 | -0.463100888 | 2.142081021 | 1.918896247 |
| rdIA   | TY-2482_chromosome | + | 223116 | 223178 | 91.48636817 | 73.48865256 | 61.08203913 | 84.55658466 | 95.51342013 | 91.6318212  | -0.268736653 | 0.653961051 | 0.552050341 |
| C1NCG3 | TY-2482_chromosome | + | 223378 | 223614 | 109.4076317 | 105.7188158 | 62.98863449 | 114.8604533 | 112.7078302 | 117.4684645 | -0.388296674 | 0.898467021 | 0.772017693 |
| rdIC   | TY-2482_chromosome | + | 223647 | 223714 | 105.5095971 | 78.88308083 | 57.13610293 | 107.7697111 | 116.3176792 | 117.0521882 | -0.508936809 | 1.70489526  | 1.510411367 |
| B7LGX9 | TY-2482_chromosome | - | 224007 | 225104 | 945.2222343 | 750.9129652 | 863.4601785 | 1111.191707 | 1271.015873 | 1179.87632  | -0.425764225 | 4.594693954 | 4.250911978 |
| A1AAE4 | TY-2482_chromosome | - | 225371 | 225667 | 314.1346805 | 362.7885234 | 326.2748389 | 71.89711201 | 79.9813169  | 93.23392619 | 2.002516849  | 37.3766378  | 36.52659391 |
| B7LHL5 | TY-2482_chromosome | + | 225741 | 226454 | 907.6572559 | 1047.887057 | 1048.603854 | 482.96502   | 452.4653328 | 474.2059074 | 1.075216617  | 23.52029873 | 22.82245823 |
| B7LHG5 | TY-2482_chromosome | - | 226504 | 226854 | 1458.965442 | 1796.961683 | 1818.542912 | 2023.140282 | 1964.108204 | 2329.723416 | -0.33088798  | 2.066355176 | 1.847655909 |
| B7LHG6 | TY-2482_chromosome | + | 227180 | 228430 | 681.1818049 | 715.3121459 | 681.1250577 | 1191.395035 | 1240.563415 | 1387.667456 | -0.888174138 | 15.46652476 | 14.86654772 |
| B7LHG8 | TY-2482_chromosome | - | 229080 | 230873 | 5244.919579 | 5084.43078  | 5179.439193 | 8125.946882 | 7132.561232 | 7247.085943 | -0.533716172 | 1.095323612 | 0.951053357 |
| D3H2K9 | TY-2482_chromosome | + | 230899 | 231114 | 115.519607  | 108.6438929 | 124.7410186 | 160.1284386 | 148.9925612 | 131.9750581 | -0.315388663 | 1.222576907 | 1.068122135 |
| B7LHG9 | TY-2482_chromosome | + | 231212 | 232600 | 39427.05695 | 34813.34359 | 36429.8329  | 41428.64789 | 30180.92339 | 29718.75777 | 0.138944739  | 0.136453692 | 0.11018456  |
| B7LHH0 | TY-2482_chromosome | + | 233119 | 236859 | 115619.6772 | 99006.4223  | 105276.5093 | 183692.6816 | 166857.6075 | 164471.4933 | -0.66173283  | 1.148981526 | 1.000078102 |
| B7LHH1 | TY-2482_chromosome | + | 236859 | 238394 | 6682.204741 | 7353.266268 | 7087.39174  | 44747.1418  | 42690.9838  | 41979.80117 | -2.635507265 | 11.41757676 | 10.88454651 |
| B7LHH2 | TY-2482_chromosome | + | 238394 | 239101 | 1372.263505 | 1418.400563 | 1580.001878 | 18758.68164 | 17906.90449 | 16266.62971 | -3.585713824 | 22.51523056 | 21.83147652 |
| B7LHH3 | TY-2482_chromosome | + | 239104 | 239778 | 933.0798465 | 870.9541984 | 1023.98736  | 13820.39363 | 13815.73116 | 13072.75458 | -3.811759162 | 26.89356317 | 26.15718407 |
| B7LHH4 | TY-2482_chromosome | + | 239961 | 240407 | 226.7243705 | 274.7430342 | 268.4682318 | 1247.264178 | 1339.806982 | 1408.173745 | -2.396815044 | 86.23469812 | 85.05625154 |
| rttR   | TY-2482_chromosome | - | 239965 | 240135 | 55.9117621  | 74.92856042 | 50.79939244 | 384.3480085 | 462.0144558 | 524.8066617 | -3.009090754 | 51.21827576 | 50.2697375  |
| tyrT   | TY-2482_chromosome | - | 240143 | 240227 | 86.91387785 | 116.2126906 | 99.18140096 | 736.6705763 | 746.6710327 | 820.3304166 | -2.986801667 | 81.25756121 | 80.10582929 |
| tyrT   | TY-2482_chromosome | - | 240262 | 240346 | 127.4359627 | 144.0952096 | 153.3898871 | 677.0516981 | 689.8710137 | 678.0656866 | -2.26805927  | 57.38917214 | 56.40016753 |
| B7LHH5 | TY-2482_chromosome | - | 240509 | 241348 | 1788.267069 | 1818.588528 | 2018.245601 | 2152.138214 | 2079.102327 | 2020.381917 | -0.136155999 | 0.764905051 | 0.651865537 |
| B5YYD8 | TY-2482_chromosome | - | 241401 | 241877 | 1124.056326 | 1379.74291  | 1353.160642 | 1302.884767 | 1313.946106 | 1458.922806 | -0.102254894 | 0.35853541  | 0.296849017 |
| B7LHH7 | TY-2482_chromosome | + | 241930 | 242871 | 1475.86132  | 1424.380534 | 1525.669454 | 1741.037602 | 1556.010761 | 1566.424101 | -0.122448631 | 0.662496477 | 0.560268908 |
| B7LHH8 | TY-2482_chromosome | + | 242966 | 243976 | 1175.301034 | 1077.653532 | 1331.298096 | 1442.813868 | 1393.172888 | 1273.392606 | -0.152829552 | 1.128421305 | 0.981718702 |
| B7LHH9 | TY-2482_chromosome | + | 244181 | 245086 | 4058.784782 | 4200.294149 | 4354.579496 | 4275.274655 | 4428.086509 | 4595.273629 | -0.070664284 | 0.111976828 | 0.089113945 |
| B7LHI0 | TY-2482_chromosome | - | 245236 | 245646 | 36971.39793 | 35249.73048 | 34600.95701 | 28881.97213 | 30302.8749  | 32248.7771  | 0.230250033  | 0.270741593 | 0.222968811 |

|               |                    |   |        |        |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LHI1</b> | TY-2482_chromosome | + | 246252 | 246866 | 238.2001125 | 324.733624  | 263.1317048 | 465.4986105 | 472.8425405 | 482.0882263 | -0.858903175 | 8.171149011 | 7.710920537  |
| <b>P30192</b> | TY-2482_chromosome | - | 247154 | 248051 | 79.77966501 | 102.0947424 | 66.79224229 | 338.1572552 | 402.1089711 | 367.7746091 | -2.257323209 | 33.30085902 | 32.48851079  |
| <b>B7LHI5</b> | TY-2482_chromosome | - | 248178 | 250850 | 66770.00018 | 54998.3791  | 61848.34402 | 64171.85259 | 58413.50494 | 61520.94376 | 0.03798762   | 0.003594632 | 0.002200427  |
| <b>B7LHI6</b> | TY-2482_chromosome | + | 251327 | 251971 | 684.3151626 | 694.0494797 | 673.935028  | 701.3502017 | 715.4575854 | 847.3847213 | -0.14219972  | 0.704241315 | 0.598254554  |
| <b>D6J9L4</b> | TY-2482_chromosome | - | 252135 | 252446 | 1212.041441 | 1181.434378 | 1007.736829 | 811.6265697 | 936.3006123 | 981.0718232 | 0.297160125  | 2.32228982  | 2.088057448  |
| <b>B7LHI8</b> | TY-2482_chromosome | + | 252712 | 254340 | 5950.495003 | 5950.679636 | 6117.537199 | 11114.01706 | 10855.01308 | 9796.889196 | -0.817140299 | 1.966313189 | 1.753901942  |
| <b>B7LHI9</b> | TY-2482_chromosome | + | 254429 | 255346 | 1063.32815  | 1148.519349 | 1119.205783 | 2927.336526 | 3013.075651 | 2693.710166 | -1.391099456 | 32.57790738 | 31.77283956  |
| <b>B7LHJ0</b> | TY-2482_chromosome | + | 255364 | 256269 | 1219.114349 | 1212.155156 | 1254.195058 | 2958.376037 | 3054.975327 | 2814.92032  | -1.255216709 | 28.4250756  | 27.6707899   |
| <b>B7LHJ1</b> | TY-2482_chromosome | + | 256284 | 257294 | 2078.841242 | 2029.202232 | 2109.065453 | 3213.819422 | 3130.531844 | 2669.014479 | -0.532349854 | 2.868442085 | 2.603687384  |
| <b>B7LHJ2</b> | TY-2482_chromosome | + | 257294 | 258295 | 2301.123794 | 2037.110248 | 2201.058862 | 2072.302318 | 2202.292714 | 1769.828165 | 0.135429443  | 0.491104487 | 0.409515431  |
| <b>B7LHJ3</b> | TY-2482_chromosome | - | 258354 | 258680 | 932.5537711 | 862.4485566 | 842.1721126 | 585.3465837 | 528.8005354 | 541.7102388 | 0.673442543  | 9.636373677 | 9.13976928   |
| <b>B7LHJ4</b> | TY-2482_chromosome | - | 258718 | 260175 | 2178.062054 | 2151.337147 | 2251.256937 | 2153.337069 | 2023.108512 | 2077.180067 | 0.082542478  | 0.304106692 | 0.250959515  |
| <b>B7LHJ5</b> | TY-2482_chromosome | + | 260207 | 260488 | 955.0034889 | 1123.315644 | 534.8451335 | 640.8410256 | 1070.718682 | 785.4778701 | -0.089397856 | 0.123150839 | 0.099002245  |
| <b>B7LHJ6</b> | TY-2482_chromosome | - | 260549 | 261799 | 963.839723  | 940.2333741 | 971.1991361 | 740.280253  | 841.0313967 | 876.0452989 | 0.240617478  | 1.53234953  | 1.351930372  |
| <b>D3H2N2</b> | TY-2482_chromosome | - | 262102 | 262401 | 1576.744241 | 1616.487333 | 1610.580354 | 1734.754486 | 1609.710067 | 1695.142772 | -0.073196061 | 0.289500786 | 0.238902522  |
| <b>B7LHJ8</b> | TY-2482_chromosome | + | 262619 | 263335 | 1978.176409 | 2097.727214 | 1929.747567 | 529.0253801 | 469.3883346 | 432.6087762 | 2.039361349  | 86.7505739  | 85.56817317  |
| <b>B7LHJ9</b> | TY-2482_chromosome | - | 263381 | 263776 | 289.6875772 | 211.7420298 | 225.9431567 | 382.3926337 | 437.8248827 | 534.2408023 | -0.840507437 | 7.990376201 | 7.535139673  |
| <b>B7LHK0</b> | TY-2482_chromosome | - | 263884 | 264420 | 960.3843531 | 907.1380751 | 919.5964585 | 1375.352514 | 1269.901461 | 1285.223422 | -0.489144773 | 6.01713171  | 5.620289612  |
| <b>B7LHK1</b> | TY-2482_chromosome | - | 264453 | 265193 | 932.0398536 | 1070.410826 | 1083.055294 | 1893.123093 | 1823.07633  | 1817.453141 | -0.857041933 | 14.85884063 | 14.26879271  |
| <b>B7LHK2</b> | TY-2482_chromosome | + | 265550 | 266185 | 1033.27868  | 1030.35349  | 845.464867  | 621.3101578 | 592.0799213 | 445.3601973 | 0.762659081  | 9.911514288 | 9.407754053  |
| <b>B7LHK3</b> | TY-2482_chromosome | - | 266237 | 267364 | 174.6671002 | 217.7363561 | 199.6599364 | 197.8017775 | 202.2812327 | 199.2851727 | -0.059223551 | 0.062992336 | 0.049921894  |
| <b>E8IYI4</b> | TY-2482_chromosome | - | 267268 | 267590 | 74.4416267  | 67.89935422 | 66.30298659 | 78.20598875 | 73.90728268 | 65.29879753 | -0.061744467 | 0.096723259 | 0.076693834  |
| <b>B7LHK5</b> | TY-2482_chromosome | - | 267658 | 270126 | 99.26204667 | 96.33948451 | 104.7362997 | 247.1521846 | 255.0855706 | 261.6165441 | -1.328276043 | 15.06355164 | 14.47010547  |
| <b>E7JE17</b> | TY-2482_chromosome | + | 270189 | 270791 | 8.190067096 | 12.30297128 | 6.083798779 | 50.11506655 | 43.43524162 | 29.66368499 | -2.357992275 | 7.276286641 | 6.841866741  |
| <b>E1IYN5</b> | TY-2482_chromosome | + | 270824 | 271157 | 386.207443  | 399.421335  | 276.8853419 | 329.1453025 | 438.7731526 | 354.1276239 | -0.14849347  | 0.250980736 | 0.205629047  |
| <b>B7LHK9</b> | TY-2482_chromosome | + | 271090 | 271353 | 823.5861505 | 782.8049895 | 703.0261026 | 608.4578963 | 751.2407756 | 710.0489286 | 0.148247489  | 0.769815461 | 0.656360519  |
| <b>B7LHL0</b> | TY-2482_chromosome | - | 271348 | 271695 | 298.6010121 | 292.3960857 | 244.8341281 | 276.5898389 | 362.7049721 | 354.4191285 | -0.272547464 | 1.077123076 | 0.934909658  |
| <b>C8UCK2</b> | TY-2482_chromosome | - | 271698 | 271928 | 57.17948152 | 78.96466303 | 49.49696054 | 95.14116119 | 104.8350663 | 94.12087417 | -0.783311078 | 2.644107578 | 2.39003399   |
| <b>C8TR54</b> | TY-2482_chromosome | - | 272147 | 272563 | 1100.72875  | 1208.84872  | 1148.000303 | 0           | 0           | 0           | 14.24610676  | 325.0237216 | 323.0330172  |
| <b>E1IYP5</b> | TY-2482_chromosome | + | 274339 | 274767 | 84.35133796 | 102.15351   | 62.67062798 | 17.54244106 | 22.19021674 | 26.92992805 | 1.800758126  | 12.18755777 | 11.64340272  |
| <b>D3H4E4</b> | TY-2482_chromosome | + | 274924 | 275607 | 1630.238559 | 1622.581079 | 1617.812484 | 0           | 0           | 0           | 14.76125367  | 325.0237216 | 323.0330172  |
| <b>E1IYP7</b> | TY-2482_chromosome | + | 275791 | 276000 | 44830.75162 | 35038.26128 | 37905.46867 | 26578.59559 | 22413.26121 | 24358.33191 | 0.722743328  | 1.205887535 | 1.052920075  |
| <b>E7IAU7</b> | TY-2482_chromosome | - | 276048 | 276518 | 2875.981511 | 2566.859574 | 2243.400238 | 1534.431409 | 1261.054994 | 892.8349934 | 1.03099544   | 12.04162262 | 11.50050248  |
| <b>B7L8R9</b> | TY-2482_chromosome | + | 276445 | 277488 | 31.8329515  | 24.40803826 | 23.34504568 | 112.0966801 | 161.4747515 | 182.0489974 | -2.484669921 | 20.96204271 | 20.29879741  |
| <b>B7LER7</b> | TY-2482_chromosome | + | 277875 | 278693 | 45.59954478 | 48.76652887 | 44.66785819 | 40.06247552 | 39.48795874 | 26.60639834 | 0.35305967   | 0.80407356  | 0.687293525  |
| <b>C8UNL5</b> | TY-2482_chromosome | + | 278818 | 279117 | 1029.394498 | 1137.756239 | 1153.512238 | 823.1500834 | 1141.277817 | 1268.078959 | 0.043780779  | 0.113509713 | 0.09046339   |
| <b>B7LER9</b> | TY-2482_chromosome | + | 279271 | 280317 | 206.6357376 | 179.219386  | 244.9767396 | 476.3904548 | 622.7380007 | 639.6223234 | -1.384534636 | 20.72972095 | 20.06927112  |
| <b>ileY</b>   | TY-2482_chromosome | + | 280370 | 280445 | 94.19025537 | 86.07494515 | 94.74296173 | 335.1854099 | 435.5883289 | 444.8341435 | -2.111186897 | 34.92474187 | 34.09862356  |
| <b>B7L8R4</b> | TY-2482_chromosome | + | 280730 | 281080 | 137.6179135 | 188.7243426 | 173.6513552 | 222.8107634 | 239.3996759 | 273.194501  | -0.600248331 | 3.179528385 | 2.898891547  |
| <b>B7MV04</b> | TY-2482_chromosome | + | 281211 | 281522 | 5816.949417 | 6303.145869 | 2003.961769 | 5195.072998 | 5162.817286 | 2204.314857 | -0.057323908 | 0.179874512 | 0.145395058  |
| <b>B7UQ15</b> | TY-2482_chromosome | - | 281534 | 281866 | 537.5910638 | 450.159949  | 525.6840654 | 0           | 0           | 0           | 13.12174701  | 176.5941224 | 175.02229526 |
| <b>B7LES0</b> | TY-2482_chromosome | + | 282127 | 283977 | 696.4845141 | 799.3319745 | 855.8549566 | 369.3922645 | 374.7019031 | 373.3391391 | 1.07224842   | 19.68288685 | 19.03537858  |
| <b>B7LES2</b> | TY-2482_chromosome | + | 284351 | 285154 | 87.43292455 | 123.8841585 | 125.9141293 | 9.408656782 | 21.21920461 | 11.4651045  | 2.966348471  | 30.13418822 | 29.36328401  |
| <b>D3QSD5</b> | TY-2482_chromosome | + | 286376 | 286840 | 29.02115368 | 27.68458752 | 24.67783219 | 18.26558731 | 23.48885314 | 20.64554807 | 0.364740661  | 0.567143354 | 0.4763238    |
| <b>D8EE44</b> | TY-2482_chromosome | + | 287803 | 288204 | 1021.917602 | 1312.976293 | 1328.550906 | 0           | 0           | 0           | 14.32562849  | 292.197285  | 290.2624384  |
| <b>B7L465</b> | TY-2482_chromosome | + | 289086 | 291053 | 87.5091613  | 95.15162639 | 69.61423096 | 74.11898325 | 75.05185694 | 60.0479977  | 0.198840678  | 0.616529371 | 0.520206199  |
| <b>B7L467</b> | TY-2482_chromosome | + | 291243 | 292832 | 152.4511903 | 122.8132425 | 152.0722269 | 32.07269461 | 45.01864356 | 33.66231282 | 2.001675206  | 21.60622105 | 20.93570368  |
| <b>C8U3B6</b> | TY-2482_chromosome | + | 292825 | 294327 | 111.9701836 | 106.4562866 | 105.0253369 | 15.06160594 | 12.40907802 | 18.49588775 | 2.814696072  | 31.89430596 | 31.10182727  |
| <b>B7L470</b> | TY-2482_chromosome | + | 294772 | 295797 | 158.5584993 | 201.5475153 | 192.3266811 | 1.744715342 | 4.82154351  | 5.41819024  | 5.481478147  | 81.81883388 | 80.66338473  |
| <b>A1AAL5</b> | TY-2482_chromosome | - | 297652 | 298983 | 157.0749825 | 131.3902987 | 138.1065599 | 102.3630084 | 128.3627912 | 106.4784757 | 0.365114298  | 1.294661078 | 1.134708834  |
| <b>B7LEU0</b> | TY-2482_chromosome | + | 299174 | 301744 | 206.6689071 | 234.7144971 | 201.4300631 | 179.5075087 | 176.498834  | 182.8299894 | 0.211111135  | 0.932091342 | 0.920487744  |
| <b>Q1RCC4</b> | TY-2482_chromosome | - | 301980 | 302777 | 84.45989793 | 95.11644257 | 72.36016904 | 21.51764289 | 21.38676444 | 28.76597774 | 1.755469931  | 12.86339169 | 12.30906823  |
| <b>B7ML65</b> | TY-2482_chromosome | + | 304120 | 304467 | 900.9338258 | 1061.460993 | 922.6140572 | 0           | 0           | 0           | 13.95869682  | 276.221574  | 274.3493743  |
| <b>B7LBD5</b> | TY-2482_chromosome | + | 304537 | 308013 | 337.2554821 | 437.2880557 | 369.4036776 | 285.8744434 | 285.9554016 | 309.1925143 | 0.315380991  | 2.117218888 | 1.895486121  |
| <b>D3H3F5</b> | TY-2482_chromosome | + | 308084 | 308680 | 82.91331738 | 71.53242275 | 90.17475098 | 46.29909907 | 37.74203874 | 53.17839256 | 0.888902225  | 3.963861469 | 3.647243375  |



|               |                    |   |        |        |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>E6AYR0</b> | TY-2482_chromosome | + | 308835 | 311666 | 471.6659023 | 524.6359685 | 477.161251  | 167.7360505 | 189.3321148 | 198.8077479 | 1.38020961   | 25.86604554 | 25.14182187  |
| <b>B2U0E5</b> | TY-2482_chromosome | + | 311669 | 312250 | 285.0656941 | 359.6471352 | 296.2402246 | 86.4662198  | 81.00225841 | 114.8747499 | 1.680577763  | 24.25077989 | 23.54373139  |
| <b>D3H3F8</b> | TY-2482_chromosome | - | 312311 | 312976 | 1377.447408 | 1694.671857 | 1531.595385 | 884.0165894 | 970.9761997 | 1037.68457  | 0.631132088  | 9.266849459 | 8.779160907  |
| <b>A1AAM7</b> | TY-2482_chromosome | - | 313125 | 313472 | 33.16947277 | 39.1179783  | 44.13562888 | 19.98353823 | 20.25037699 | 25.35756787 | 0.83288895   | 2.297993388 | 2.0649529    |
| <b>B7L489</b> | TY-2482_chromosome | - | 314079 | 314582 | 39.0678602  | 35.85426153 | 41.51048462 | 19.69894066 | 39.46789797 | 31.42462904 | 0.397435991  | 0.664935552 | 0.562597888  |
| <b>B7L492</b> | TY-2482_chromosome | - | 315777 | 316580 | 487.1457387 | 460.8290075 | 417.0899252 | 736.5865331 | 802.896773  | 659.9891307 | -0.704427922 | 7.971212217 | 7.516223787  |
| <b>B7L493</b> | TY-2482_chromosome | - | 316583 | 317773 | 777.9927118 | 639.22977   | 735.5264876 | 976.8895363 | 919.8071132 | 834.1089666 | -0.302288855 | 2.573805429 | 2.32315395   |
| <b>B7L494</b> | TY-2482_chromosome | - | 317788 | 319143 | 599.7370267 | 574.2730895 | 607.660097  | 631.3684276 | 623.9825724 | 596.8647835 | -0.042958723 | 0.194659507 | 0.157513612  |
| <b>B7L495</b> | TY-2482_chromosome | - | 319150 | 320778 | 201.6510523 | 210.0689325 | 199.8227669 | 294.8796417 | 307.4193126 | 227.2700558 | -0.463189474 | 2.414469751 | 2.173622867  |
| <b>B7L496</b> | TY-2482_chromosome | - | 320781 | 322340 | 98.93162568 | 90.77419289 | 93.472303   | 254.3605573 | 265.6802969 | 262.8766302 | -1.453358332 | 17.42766302 | 16.80383916  |
| <b>B7L498</b> | TY-2482_chromosome | + | 322614 | 323492 | 1329.413054 | 1225.52569  | 1341.775802 | 1475.318336 | 1638.619161 | 1464.176717 | -0.207628911 | 1.5648502   | 1.382052065  |
| <b>B5YZP6</b> | TY-2482_chromosome | + | 323456 | 324109 | 1481.358574 | 1617.101714 | 1762.447416 | 1914.981197 | 1916.410755 | 1834.398582 | -0.21511654  | 1.318957359 | 1.1561035    |
| <b>B7L4A0</b> | TY-2482_chromosome | + | 324186 | 325082 | 2153.908939 | 2250.052722 | 2314.434812 | 3977.174417 | 4477.306523 | 4752.084088 | -0.968645477 | 6.274548184 | 5.86897261   |
| <b>B7L4A1</b> | TY-2482_chromosome | - | 325128 | 325715 | 754.5642541 | 857.3196137 | 773.1281265 | 1029.362805 | 1069.726751 | 1023.279882 | -0.424330505 | 3.80909142  | 3.500345031  |
| <b>B7L4A2</b> | TY-2482_chromosome | - | 325715 | 326470 | 884.7999462 | 1035.149146 | 964.0616648 | 1016.061714 | 954.3224691 | 998.5823612 | -0.0744119   | 0.186158935 | 0.150499532  |
| <b>B7L4A4</b> | TY-2482_chromosome | + | 326690 | 327736 | 2538.232881 | 3075.903913 | 3260.875012 | 2562.182144 | 2495.264921 | 2545.9014   | 0.214235469  | 0.722400428 | 0.614410255  |
| <b>B7L4A5</b> | TY-2482_chromosome | - | 327778 | 328026 | 1999.94374  | 2493.637205 | 2175.351807 | 2690.02992  | 2696.643867 | 2871.641659 | -0.359668174 | 1.184393418 | 1.032538108  |
| <b>B7L4A6</b> | TY-2482_chromosome | + | 328071 | 328280 | 205.4616479 | 241.845301  | 235.4806701 | 429.275305  | 523.6801219 | 514.5261586 | -1.121733881 | 14.63108572 | 14.06432029  |
| <b>B7L4A7</b> | TY-2482_chromosome | + | 328406 | 331048 | 4326.846922 | 4361.910375 | 4535.64306  | 7215.718634 | 7918.829973 | 7270.613101 | -0.754306916 | 1.916906578 | 1.708731006  |
| <b>B7L4A8</b> | TY-2482_chromosome | + | 331261 | 332232 | 2885.101431 | 2731.355034 | 3117.372351 | 2811.986622 | 2773.565236 | 2743.761934 | 0.098614532  | 0.168939696 | 0.13652742   |
| <b>B7L4B0</b> | TY-2482_chromosome | + | 332675 | 332860 | 1146.219734 | 1242.736511 | 1201.121142 | 740.3357554 | 700.0875255 | 721.8445398 | 0.714779765  | 12.04371227 | 11.5022896   |
| <b>B7L4B2</b> | TY-2482_chromosome | + | 333236 | 335908 | 6051.240775 | 6221.19835  | 5989.84749  | 5376.544562 | 5561.681349 | 4968.007256 | -0.185685622 | 3.809091723 | 0.245022862  |
| <b>B7L4B3</b> | TY-2482_chromosome | - | 335978 | 336565 | 3276.785778 | 3360.350536 | 3255.732179 | 2700.641766 | 2691.377583 | 2625.40632  | 0.293164123  | 1.010054841 | 0.87276232   |
| <b>E6BMY3</b> | TY-2482_chromosome | + | 336735 | 337600 | 1425.769628 | 1467.636859 | 1562.929514 | 1248.226383 | 1226.042872 | 1208.361072 | 0.282910331  | 2.271104837 | 2.039846079  |
| <b>B7L4B5</b> | TY-2482_chromosome | + | 337648 | 337953 | 1496.457623 | 1373.409284 | 1317.802153 | 1838.966954 | 1792.258133 | 1964.290398 | -0.413209621 | 3.859385331 | 3.548144456  |
| <b>B7L4B6</b> | TY-2482_chromosome | + | 337963 | 339129 | 1630.50256  | 1726.763735 | 1696.767444 | 3344.925691 | 3234.852976 | 3554.448748 | -1.011222567 | 8.846631825 | 8.2450032245 |
| <b>B5YZR3</b> | TY-2482_chromosome | + | 339265 | 340059 | 690.08681   | 617.7589567 | 572.2833942 | 992.6527675 | 1282.751498 | 1135.250068 | -0.857037874 | 12.52323529 | 11.97448773  |
| <b>B7L4B8</b> | TY-2482_chromosome | + | 340062 | 340385 | 200.3814624 | 198.0678137 | 240.8101052 | 332.2383085 | 355.7214839 | 323.8234921 | -0.626914697 | 5.342426793 | 4.965336244  |
| <b>B7L4B9</b> | TY-2482_chromosome | - | 340517 | 340732 | 627.6662893 | 686.3100455 | 635.1762506 | 245.8785753 | 249.4460204 | 273.83249   | 1.319427661  | 27.94270167 | 27.1938171   |
| <b>B7L4C0</b> | TY-2482_chromosome | - | 341004 | 341750 | 570.374971  | 525.3993326 | 573.1464129 | 1432.330763 | 1255.984108 | 1241.278011 | -1.215179898 | 27.94909007 | 27.19971725  |
| <b>B7L4C1</b> | TY-2482_chromosome | - | 341843 | 342055 | 312.2634508 | 341.4809819 | 306.2518072 | 468.0367577 | 469.1176911 | 461.1930956 | -0.574429901 | 4.937955317 | 4.758336406  |
| <b>B7L4C2</b> | TY-2482_chromosome | - | 342163 | 344145 | 993.2742369 | 974.5160626 | 1068.679589 | 892.520919  | 975.2859467 | 830.006393  | 0.186976138  | 0.990216211 | 0.854508468  |
| <b>B7L4C3</b> | TY-2482_chromosome | - | 344384 | 346315 | 4071.220095 | 3938.71916  | 3715.674191 | 3054.856452 | 3169.057096 | 3000.576737 | 0.338086193  | 1.162783956 | 1.012898797  |
| <b>B7L4C4</b> | TY-2482_chromosome | - | 346386 | 347510 | 560.264418  | 502.2226111 | 501.6452236 | 329.5010436 | 332.2936944 | 333.3009907 | 0.664480326  | 7.406579853 | 6.96843828   |
| <b>B7L4C5</b> | TY-2482_chromosome | - | 347658 | 348443 | 17109.69998 | 15231.50789 | 12327.97381 | 16901.57561 | 11028.6544  | 11355.64122 | 0.851839943  | 0.72967626  |              |
| <b>B7L5A7</b> | TY-2482_chromosome | - | 348816 | 349166 | 88.80581182 | 66.85356902 | 80.45930316 | 125.0205009 | 119.9329664 | 144.226421  | -0.65996559  | 3.524924327 | 3.226842238  |
| <b>B7L554</b> | TY-2482_chromosome | - | 349237 | 350040 | 1022.208443 | 957.9361984 | 1009.992289 | 620.7090157 | 659.8731617 | 616.249726  | 0.672838315  | 10.07832427 | 9.569540005  |
| <b>B7L555</b> | TY-2482_chromosome | - | 350045 | 351034 | 1675.77445  | 1694.159456 | 1655.209543 | 964.8614037 | 930.8865097 | 972.8541215 | 0.803451003  | 15.88076149 | 15.2762587   |
| <b>B7L556</b> | TY-2482_chromosome | - | 351037 | 351924 | 989.5953889 | 913.537102  | 951.1557809 | 643.429283  | 579.8273423 | 641.0054117 | 0.631157623  | 8.620068835 | 8.147878374  |
| <b>B7L557</b> | TY-2482_chromosome | - | 351914 | 352876 | 818.6496801 | 787.3326305 | 672.9858106 | 776.5507161 | 717.8288409 | 683.258755  | 0.037086977  | 0.232465775 | 0.19076849   |
| <b>B7L558</b> | TY-2482_chromosome | - | 352876 | 354516 | 1387.485952 | 1208.873248 | 1248.688846 | 1839.786523 | 1794.334084 | 1648.182943 | -0.440579028 | 4.353903816 | 4.020929988  |
| <b>B7L559</b> | TY-2482_chromosome | - | 354831 | 355073 | 139.8393675 | 130.8158308 | 147.7741199 | 269.1480806 | 301.8418556 | 308.7321664 | -1.040311127 | 10.96034225 | 10.4346706   |
| <b>B7L560</b> | TY-2482_chromosome | - | 355210 | 356592 | 165.4802735 | 80.04051458 | 123.6886126 | 143.2872959 | 162.8342561 | 146.1842446 | -0.162129813 | 0.13078592  | 0.62208742   |
| <b>B7L561</b> | TY-2482_chromosome | - | 356898 | 358313 | 103.5457163 | 78.62926269 | 98.99780911 | 145.9263853 | 159.0384818 | 167.9096453 | -0.682804919 | 4.188634592 | 3.863639909  |
| <b>D3H3K5</b> | TY-2482_chromosome | + | 358513 | 359286 | 177.8897557 | 209.1988327 | 210.9504392 | 162.4284485 | 147.5835748 | 171.6149906 | 0.298305526  | 1.261663061 | 1.104593175  |
| <b>B7L563</b> | TY-2482_chromosome | + | 359316 | 359870 | 247.5672057 | 281.0966249 | 271.480214  | 301.7955647 | 298.8625149 | 335.1078964 | -0.243169844 | 1.040015379 | 0.900809137  |
| <b>B7L564</b> | TY-2482_chromosome | + | 360148 | 361632 | 73.94124481 | 76.34676146 | 104.0308967 | 61.33577767 | 66.17869735 | 58.61680744 | 0.498339374  | 1.499346584 | 1.32155554   |
| <b>B7L565</b> | TY-2482_chromosome | + | 361637 | 362914 | 73.18240816 | 80.36596636 | 67.83178605 | 43.9991725  | 44.21871911 | 50.55537718 | 0.635477802  | 2.516677201 | 2.269113502  |
| <b>B7L566</b> | TY-2482_chromosome | + | 362955 | 364217 | 243.1049374 | 189.5210248 | 219.8351483 | 225.23716   | 196.4717366 | 194.8548656 | 0.127877783  | 0.259263697 | 0.21294519   |
| <b>B7L567</b> | TY-2482_chromosome | - | 364343 | 365317 | 936.2390619 | 902.1610344 | 965.3534568 | 655.3538064 | 533.2209974 | 534.4926032 | 0.7125819    | 9.831099389 | 9.328724464  |
| <b>B7L568</b> | TY-2482_chromosome | + | 365484 | 366149 | 962.5907857 | 1048.355099 | 1020.062571 | 628.3560777 | 627.6556894 | 764.1309581 | 0.577483268  | 6.98598433  | 6.562790652  |
| <b>Q8FHS4</b> | TY-2482_chromosome | - | 366228 | 366482 | 164.8109865 | 183.3937349 | 197.8992478 | 111.9437631 | 97.18265916 | 112.5580277 | 0.766378858  | 5.304515368 | 4.929492891  |
| <b>B7L570</b> | TY-2482_chromosome | + | 366430 | 366786 | 221.6150102 | 230.0990558 | 268.1523452 | 163.7566308 | 120.7683774 | 140.3193272 | 0.780830283  | 5.72377155  | 5.333420677  |
| <b>B7L571</b> | TY-2482_chromosome | + | 366798 | 367016 | 76.02020606 | 123.3020765 | 97.70426557 | 76.99514382 | 53.28523296 | 59.03204956 | 0.544141595  | 2.268294295 | 2.0377764    |
| <b>B7L572</b> | TY-2482_chromosome | + | 367094 | 367405 | 1333.33187  | 1476.47895  | 1488.286836 | 2327.369325 | 2237.314613 | 2143.69583  | -0.654932905 | 8.204312049 | 7.74332981   |

|               |                    |   |        |        |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L573</b> | TY-2482_chromosome | + | 367621 | 369297 | 16.34494307 | 13.87312142 | 18.47907775 | 28.77143988 | 27.07184636 | 28.5504926  | -0.747346076 | 1.521330071 | 1.34190346  |
| <b>B7L577</b> | TY-2482_chromosome | + | 372368 | 373417 | 26.84187677 | 46.34828559 | 31.79516588 | 24.69786366 | 30.65692878 | 26.55409369 | 0.235430603  | 0.516261815 | 0.430982895 |
| <b>B7L578</b> | TY-2482_chromosome | + | 373438 | 374223 | 42.50743886 | 41.23159923 | 48.57446062 | 26.38073051 | 30.44817704 | 28.50363667 | 0.657343266  | 1.702788474 | 1.508440702 |
| <b>C8TR14</b> | TY-2482_chromosome | + | 374236 | 375288 | 43.27392509 | 69.47348073 | 54.61195514 | 61.95435704 | 54.88786737 | 63.77317671 | -0.202316137 | 0.214626418 | 0.174554094 |
| <b>B7L581</b> | TY-2482_chromosome | + | 375288 | 377552 | 79.75848393 | 75.03704885 | 85.98009786 | 116.7056953 | 109.7567781 | 110.3524668 | -0.458587456 | 1.852665988 | 1.648128213 |
| <b>B7L584</b> | TY-2482_chromosome | + | 379352 | 380254 | 14.55301237 | 9.524735357 | 15.60834476 | 14.30383591 | 24.79126936 | 26.46620043 | -0.61959106  | 1.145755829 | 0.997097492 |
| <b>B7L585</b> | TY-2482_chromosome | - | 380371 | 381366 | 208.3952447 | 221.897467  | 225.4504261 | 438.341111  | 467.2728905 | 436.7106728 | -1.038281157 | 13.95317108 | 13.38037776 |
| <b>B7L586</b> | TY-2482_chromosome | + | 381521 | 382915 | 581.6218556 | 612.1227182 | 484.8526175 | 439.1565462 | 402.3936554 | 358.8926077 | 0.426804869  | 3.663401763 | 3.360278778 |
| <b>B7L587</b> | TY-2482_chromosome | + | 382915 | 383973 | 455.4534164 | 563.312244  | 417.2862109 | 324.0660112 | 353.5492057 | 338.7961794 | 0.41439179   | 3.464722014 | 3.170767905 |
| <b>B7L588</b> | TY-2482_chromosome | + | 384124 | 385662 | 6768.163426 | 6834.358058 | 7238.063961 | 6508.882367 | 5739.318632 | 6258.494173 | 0.180605255  | 0.236860008 | 0.19391599  |
| <b>B7L589</b> | TY-2482_chromosome | - | 385712 | 386215 | 18155.22302 | 17884.70544 | 19247.6781  | 20570.52885 | 20872.2099  | 20938.21603 | -0.157776194 | 0.208448001 | 0.169501617 |
| <b>B7L590</b> | TY-2482_chromosome | + | 386334 | 387296 | 777.2237337 | 826.8266469 | 816.0376695 | 1697.628825 | 1752.70183  | 1777.160165 | -1.119190653 | 27.11363019 | 26.374397   |
| <b>B7L591</b> | TY-2482_chromosome | - | 387277 | 388062 | 745.627788  | 643.4049312 | 712.5765642 | 879.559517  | 898.2369271 | 956.9469113 | -0.342446562 | 3.320095852 | 3.032092239 |
| <b>B7L593</b> | TY-2482_chromosome | - | 388341 | 389270 | 154.5560531 | 160.561584  | 156.6482861 | 140.6587732 | 142.1178548 | 149.326512  | 0.118844802  | 0.348881641 | 0.2888966   |
| <b>B7L594</b> | TY-2482_chromosome | + | 389396 | 390292 | 846.6758078 | 838.4916574 | 794.740091  | 803.6140744 | 825.9558842 | 773.1815266 | 0.034857186  | 0.171911854 | 0.138842905 |
| <b>B7L595</b> | TY-2482_chromosome | + | 390632 | 392242 | 1610.463271 | 1474.999692 | 1554.554349 | 2691.34493  | 2617.19954  | 2385.217115 | -0.714244975 | 10.07329235 | 9.56478873  |
| <b>B7L596</b> | TY-2482_chromosome | - | 392299 | 393327 | 415.2901129 | 532.3233297 | 461.2953376 | 884.4916772 | 952.8884836 | 855.0505573 | -0.993459039 | 14.79370608 | 14.20635775 |
| <b>B7L597</b> | TY-2482_chromosome | + | 393571 | 393825 | 1852.999105 | 2034.405206 | 1720.203444 | 1348.27583  | 1376.029679 | 1556.173562 | 0.350928377  | 3.244454776 | 3.154815548 |
| <b>B7L598</b> | TY-2482_chromosome | - | 393881 | 394828 | 8969.452441 | 10386.9318  | 10710.49838 | 14711.38302 | 14228.36217 | 14622.68318 | -0.544925753 | 0.942737268 | 0.812077134 |
| <b>B7L599</b> | TY-2482_chromosome | - | 394983 | 395732 | 4261.990711 | 3184.472812 | 3432.661627 | 6870.341213 | 8230.95566  | 8388.596436 | -1.058101343 | 3.472998163 | 3.178187288 |
| <b>B7L5A0</b> | TY-2482_chromosome | - | 395930 | 396442 | 888.5877712 | 807.2578742 | 790.4712172 | 1237.259101 | 1166.011367 | 1347.997036 | -0.582725947 | 7.48882355  | 7.047507126 |
| <b>B7L5A1</b> | TY-2482_chromosome | - | 396456 | 397979 | 438.0413037 | 605.3495151 | 444.4646095 | 222.802172  | 231.6226498 | 235.3501291 | 1.00800717   | 13.46658064 | 12.90152552 |
| <b>B7L5A2</b> | TY-2482_chromosome | - | 397912 | 398103 | 100.4383104 | 153.1694041 | 133.4419674 | 25.44408549 | 27.4956082  | 24.1361585  | 2.248713389  | 23.31938909 | 22.62543589 |
| <b>B7L5A3</b> | TY-2482_chromosome | - | 398019 | 399461 | 1233.287956 | 1757.314393 | 1489.928941 | 165.4396585 | 144.6162197 | 164.5408345 | 3.162579715  | 128.1165154 | 126.7425232 |
| <b>B7L5A4</b> | TY-2482_chromosome | - | 399464 | 400771 | 2723.409495 | 3324.412887 | 3301.330428 | 142.9829846 | 140.1066124 | 109.56439   | 4.540299734  | 237.5981886 | 235.8541566 |
| <b>B7L5A5</b> | TY-2482_chromosome | + | 400947 | 401852 | 226.2423036 | 261.954546  | 222.9810314 | 568.4396794 | 479.8018217 | 431.9606834 | -1.114170205 | 12.9992247  | 12.45028622 |
| <b>isrA</b>   | TY-2482_chromosome | - | 401858 | 402015 | 61.9264097  | 73.14686453 | 57.817512   | 102.01809   | 107.6058649 | 100.6331823 | -0.74622394  | 3.091065632 | 2.815052506 |
| <b>B7L5A6</b> | TY-2482_chromosome | + | 402185 | 402745 | 385.5143776 | 469.5367923 | 352.605686  | 541.8200998 | 639.2877652 | 662.9419843 | -0.68426291  | 5.582134132 | 5.196671381 |
| <b>B7L5A8</b> | TY-2482_chromosome | - | 402772 | 404001 | 977.2209592 | 1123.102034 | 980.1091707 | 339.0312653 | 403.8928791 | 354.2590355 | 1.446188808  | 38.8625277  | 38.00247235 |
| <b>B7L5A9</b> | TY-2482_chromosome | + | 404256 | 405236 | 1164.245323 | 1313.918468 | 1248.525179 | 626.1791406 | 636.3690727 | 684.4280682 | 0.915710538  | 18.52535033 | 17.89003359 |
| <b>D3H4C2</b> | TY-2482_chromosome | + | 405333 | 405548 | 71.58546775 | 87.39135174 | 60.9390266  | 67.53201371 | 99.245292   | 82.80005298 | -0.264661973 | 0.431779481 | 0.359845271 |
| <b>C6UTJ2</b> | TY-2482_chromosome | - | 405472 | 405705 | 49.29283752 | 62.65769187 | 54.63545901 | 29.24099405 | 38.72617758 | 34.52523734 | 0.651530696  | 2.232779707 | 2.00403261  |
| <b>B7L5B1</b> | TY-2482_chromosome | + | 405717 | 407087 | 620.6003379 | 579.3221534 | 579.1566013 | 895.8851371 | 1118.568373 | 1175.531076 | -0.826435543 | 12.03068426 | 11.48986645 |
| <b>B7L5B2</b> | TY-2482_chromosome | - | 407222 | 408154 | 630.711561  | 607.9188565 | 659.2869364 | 1433.620865 | 1606.99458  | 1543.222141 | -1.251067455 | 32.2919152  | 31.49291381 |
| <b>D3H4I5</b> | TY-2482_chromosome | - | 408333 | 408836 | 1755.797652 | 1796.337639 | 1990.980512 | 3932.430896 | 3522.678195 | 3626.735283 | -0.980748543 | 8.400303565 | 8.003243636 |
| <b>B7L5B4</b> | TY-2482_chromosome | - | 408908 | 410038 | 29.13906421 | 17.9397932  | 32.61526036 | 73.19255636 | 78.6436324  | 92.75455538 | -1.490853782 | 8.937228732 | 8.45748966  |
| <b>B7L5B5</b> | TY-2482_chromosome | - | 410408 | 413929 | 8165.886348 | 8007.564011 | 8726.466501 | 6856.074681 | 6385.839513 | 5210.995121 | 0.441547999  | 0.761655498 | 0.649129164 |
| <b>D3H4I8</b> | TY-2482_chromosome | - | 414003 | 414440 | 673.0144852 | 652.3945833 | 712.4113077 | 822.7618223 | 628.2393641 | 659.2944835 | -0.037499883 | 0.158790798 | 0.127969174 |
| <b>B7L5B7</b> | TY-2482_chromosome | - | 414469 | 414888 | 881.1343802 | 905.5648205 | 912.2876818 | 838.4625646 | 784.6841153 | 709.3227006 | 0.203032625  | 1.3208892   | 1.157782108 |
| <b>B7L5B8</b> | TY-2482_chromosome | - | 415002 | 415988 | 1620.453983 | 2392.147254 | 2235.200456 | 1416.863001 | 1262.882941 | 1161.842895 | 0.637286116  | 6.954678882 | 6.532406295 |
| <b>B7L5B9</b> | TY-2482_chromosome | + | 416196 | 418832 | 1944.251953 | 2120.021205 | 2012.92601  | 1641.910363 | 1641.427615 | 1667.990013 | 0.275950871  | 2.194733154 | 1.967896985 |
| <b>B7L6A3</b> | TY-2482_chromosome | + | 419025 | 419348 | 528.7454298 | 622.9762406 | 549.0116701 | 340.2305068 | 359.4235612 | 401.0647037 | 0.589078017  | 6.268177026 | 5.863043933 |
| <b>B7L6A4</b> | TY-2482_chromosome | - | 419526 | 420428 | 110.757952  | 128.7512872 | 106.6328348 | 133.6500209 | 139.132681  | 153.7253758 | -0.348634482 | 1.102485852 | 0.957730215 |
| <b>B7L6A5</b> | TY-2482_chromosome | + | 420664 | 422160 | 118.0612751 | 169.6320833 | 140.8410517 | 179.2958788 | 209.2664534 | 206.4464947 | -0.546318854 | 2.269993947 | 2.039031434 |
| <b>B7L6A6</b> | TY-2482_chromosome | - | 422224 | 424494 | 83.50892174 | 106.1735351 | 92.02019945 | 107.4701336 | 120.8568042 | 130.7586087 | -0.397246895 | 1.190742832 | 1.038640624 |
| <b>B7L6A7</b> | TY-2482_chromosome | - | 424745 | 426787 | 91.54692251 | 104.2991895 | 104.7124634 | 58.41246736 | 69.1312414  | 41.10185438 | 0.808348318  | 4.024299708 | 3.705149277 |
| <b>B7L6A8</b> | TY-2482_chromosome | + | 427072 | 427998 | 40.38762927 | 28.34599726 | 41.40481844 | 37.07490188 | 34.89564619 | 29.86267004 | 0.188179186  | 0.157923839 | 0.127382315 |
| <b>B7L6A9</b> | TY-2482_chromosome | + | 428013 | 428297 | 27.38858438 | 29.98611964 | 20.6058288  | 31.75944853 | 34.61886461 | 15.53076359 | -0.154142818 | 0.070123974 | 0.055346715 |
| <b>B7L6B0</b> | TY-2482_chromosome | + | 428309 | 429052 | 47.13499189 | 49.01799722 | 44.70950333 | 51.73926173 | 60.78492423 | 33.61813542 | -0.086771298 | 0.065030041 | 0.051331552 |
| <b>B7L6B1</b> | TY-2482_chromosome | + | 429070 | 429564 | 32.87494388 | 31.12993542 | 41.21651562 | 47.41617733 | 33.86205109 | 33.01312343 | -0.083740499 | 0.150173669 | 0.120657634 |
| <b>B7L6B2</b> | TY-2482_chromosome | + | 429575 | 430642 | 103.9797409 | 100.9367251 | 102.0556318 | 101.0069797 | 102.0143094 | 60.10048471 | 0.210629462  | 0.544951598 | 0.456378124 |
| <b>B7L6B3</b> | TY-2482_chromosome | + | 430642 | 431406 | 72.88690516 | 67.7025519  | 66.2719966  | 81.07291943 | 86.4542581  | 41.85672878 | -0.032978184 | 0.022215506 | 0.017228087 |
| <b>B7L6B4</b> | TY-2482_chromosome | + | 431409 | 432194 | 68.4746033  | 68.19686464 | 74.53096389 | 62.81423231 | 70.955747   | 47.29274781 | 0.226274805  | 0.507496018 | 0.423907784 |
| <b>B7L6B5</b> | TY-2482_chromosome | + | 432199 | 433623 | 104.9929119 | 123.0299767 | 144.4297468 | 113.5620744 | 110.3162707 | 65.09507788 | 0.363826461  | 1.081082616 | 0.938506934 |
| <b>B7L6B6</b> | TY-2482_chromosome | + | 433616 | 434035 | 40.59464665 | 36.0859376  | 41.55970886 | 47.50130563 | 47.342999   | 26.17440852 | -0.019616399 | 0.01761807  | 0.01350259  |

|               |                    |   |        |        |             |             |             |             |             |             |              |              |              |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| <b>B7L6B7</b> | TY-2482_chromosome | + | 434038 | 435240 | 160.3910504 | 198.9475982 | 219.2061274 | 195.8467465 | 193.2011527 | 136.3841224 | 0.124011535  | 0.350741536  | 0.290256789  |
| <b>B7L6B8</b> | TY-2482_chromosome | + | 435270 | 436580 | 263.2514973 | 237.493838  | 274.1755467 | 251.9998676 | 263.1827772 | 211.9211119 | 0.121716679  | 0.315523136  | 0.260701236  |
| <b>B7L6B9</b> | TY-2482_chromosome | + | 436684 | 437631 | 1034.511386 | 1134.562033 | 1292.470012 | 783.2800231 | 705.4443424 | 723.5589653 | 0.659491241  | 8.412699722  | 7.946149529  |
| <b>B7L6C0</b> | TY-2482_chromosome | + | 437616 | 438203 | 994.9985709 | 991.1298734 | 1098.784876 | 699.5612164 | 674.5519317 | 690.0870332 | 0.599306307  | 7.820354844  | 7.371033883  |
| <b>B7L6C1</b> | TY-2482_chromosome | + | 438436 | 439293 | 524.1701322 | 650.4857057 | 593.3591187 | 612.887598  | 573.513273  | 545.6298725 | -0.017386087 | 0.0579030375 | 0.045993902  |
| <b>B7L6C2</b> | TY-2482_chromosome | + | 439360 | 441663 | 126.9342863 | 149.5177658 | 115.425588  | 429.9130862 | 523.4663822 | 558.1579694 | -2.005662082 | 33.17013365  | 32.35947638  |
| <b>B7L6C3</b> | TY-2482_chromosome | + | 441837 | 442439 | 6.814508745 | 9.763413708 | 8.585500591 | 18.53093007 | 24.7530122  | 22.61068382 | -1.441165872 | 2.713263706  | 2.455898211  |
| <b>B7L6C5</b> | TY-2482_chromosome | + | 443354 | 445108 | 103.6780132 | 95.49133214 | 92.1934671  | 89.32537983 | 91.56176424 | 87.30378845 | 0.119443164  | 0.26624428   | 0.219053793  |
| <b>B7L6C6</b> | TY-2482_chromosome | + | 445125 | 446414 | 80.88848996 | 117.2131455 | 113.1087965 | 67.43573608 | 58.3682937  | 61.08972721 | 0.687061952  | 3.225446197  | 2.9419779    |
| <b>B7L6C7</b> | TY-2482_chromosome | - | 446471 | 447073 | 471.6764048 | 554.9038506 | 451.5609166 | 428.7455489 | 422.6743471 | 465.3155117 | 0.110063882  | 0.655259261  | 0.553691714  |
| <b>B7L6C8</b> | TY-2482_chromosome | + | 447331 | 451173 | 5700.040652 | 5551.018864 | 5660.732035 | 4806.520738 | 4590.015305 | 4470.063027 | 0.290700628  | 0.482488539  | 0.401947998  |
| <b>B7L6C9</b> | TY-2482_chromosome | + | 451448 | 452245 | 247.1600915 | 231.3848955 | 266.9294676 | 265.889855  | 260.1474453 | 249.7388299 | -0.027389384 | 0.133522996  | 0.107623398  |
| <b>B7L6D0</b> | TY-2482_chromosome | + | 452445 | 453881 | 429.0788597 | 422.8768741 | 423.8874326 | 340.90941   | 343.8234187 | 256.7042738 | 0.430458815  | 2.985365297  | 2.714252123  |
| <b>B7L6D1</b> | TY-2482_chromosome | - | 453929 | 454927 | 62.644716   | 613.9580092 | 649.4112504 | 267.5286827 | 268.7881878 | 287.0502501 | 1.255830293  | 25.0706693   | 24.25330666  |
| <b>B7L6D2</b> | TY-2482_chromosome | + | 455116 | 455643 | 1135.11782  | 1281.644844 | 1287.12515  | 1784.968734 | 1815.073292 | 1934.335619 | -0.589241421 | 6.808988947  | 6.39060935   |
| <b>Q0THZ6</b> | TY-2482_chromosome | + | 456130 | 456357 | 1102.478315 | 929.3388189 | 822.5178904 | 884.9513075 | 1038.32999  | 910.8276317 | 0.009343612  | 0.032226942  | 0.02529913   |
| <b>B7L6D5</b> | TY-2482_chromosome | + | 456684 | 458321 | 298.0756495 | 332.7789925 | 348.8243767 | 8636.599688 | 6367.732391 | 6073.857524 | -4.441537608 | 76.98476343  | 75.85936046  |
| <b>B7L6D6</b> | TY-2482_chromosome | - | 458365 | 459285 | 281.311753  | 302.9086671 | 271.7894949 | 1378.378632 | 1216.092971 | 1227.104131 | -2.191062971 | 74.95922393  | 73.84187433  |
| <b>B7L6D7</b> | TY-2482_chromosome | + | 459502 | 460842 | 150.139816  | 119.7235689 | 114.0123808 | 206.4484277 | 201.4940331 | 274.2177171 | -0.802311211 | 5.338585236  | 4.961701938  |
| <b>D7XGD6</b> | TY-2482_chromosome | - | 460845 | 461039 | 48.92028659 | 39.41677105 | 58.36033075 | 85.61247022 | 55.65068825 | 63.12719469 | -0.408284434 | 1.232087703  | 1.076887361  |
| <b>B7L6D8</b> | TY-2482_chromosome | + | 461100 | 462722 | 1052.005399 | 1127.163579 | 1142.07331  | 1494.640356 | 1473.842178 | 1315.234397 | -0.376929554 | 3.474023122  | 3.179040691  |
| <b>B7L6D9</b> | TY-2482_chromosome | - | 462649 | 462849 | 90.43678447 | 119.1398955 | 120.2893333 | 169.3261234 | 168.7967639 | 155.2453965 | -0.610299316 | 2.923075752  | 2.655682122  |
| <b>B7L6E0</b> | TY-2482_chromosome | + | 462865 | 463086 | 640.974034  | 782.5958268 | 662.5916428 | 793.0950541 | 837.7570211 | 941.6050808 | -0.353075509 | 2.202787663  | 1.975217516  |
| <b>B7L6E1</b> | TY-2482_chromosome | + | 463137 | 463685 | 588.7789263 | 612.0955096 | 657.7479157 | 316.2871002 | 330.3962415 | 377.1983623 | 0.875545019  | 12.23160961  | 11.68653993  |
| <b>B7L6E2</b> | TY-2482_chromosome | - | 463686 | 464663 | 530.1081592 | 498.9717073 | 602.9260861 | 155.0981758 | 140.6583519 | 146.7880489 | 1.922078363  | 45.06671086  | 44.16222667  |
| <b>B7L6E3</b> | TY-2482_chromosome | + | 464787 | 465776 | 399.6497187 | 413.6396282 | 349.6211217 | 450.3216428 | 445.8064595 | 480.8909099 | -0.277015883 | 1.351496581  | 1.186103724  |
| <b>B7L6E4</b> | TY-2482_chromosome | + | 465776 | 466366 | 471.562739  | 468.4856586 | 506.9508891 | 526.5556715 | 576.5864354 | 603.4384082 | -0.218360976 | 1.347908651  | 1.182897591  |
| <b>B7L6E5</b> | TY-2482_chromosome | + | 466672 | 467337 | 1238.660126 | 1261.217994 | 1267.18493  | 592.3498592 | 622.4159345 | 603.0263889 | 1.050190786  | 25.26862299  | 24.54898537  |
| <b>B3IA33</b> | TY-2482_chromosome | - | 467361 | 467844 | 187.6325726 | 215.685306  | 225.2422133 | 125.3334679 | 126.4234194 | 144.1149081 | 0.664389111  | 4.451264821  | 4.113204858  |
| <b>B7L6E8</b> | TY-2482_chromosome | + | 467867 | 469072 | 485.0976834 | 443.2360315 | 361.4101846 | 345.9074607 | 455.3360627 | 465.117922  | 0.00975345   | 0.056162504  | 0.044613548  |
| <b>B7L6E9</b> | TY-2482_chromosome | - | 469118 | 470290 | 194.727972  | 201.8322986 | 160.1008435 | 207.9615735 | 208.2347037 | 235.715826  | -0.269757014 | 0.86068878   | 0.737024145  |
| <b>B7L6F0</b> | TY-2482_chromosome | + | 470382 | 470915 | 196.1801636 | 160.7172938 | 183.8736468 | 282.7567468 | 293.3990983 | 285.3537428 | -0.628549717 | 5.148350346  | 4.780489543  |
| <b>B7L6F1</b> | TY-2482_chromosome | + | 470991 | 472949 | 838.3740861 | 742.8352133 | 814.5669155 | 1553.466277 | 1793.262305 | 1517.895142 | -0.993454202 | 20.49480146  | 19.8383142   |
| <b>B7L6F2</b> | TY-2482_chromosome | - | 473047 | 473274 | 35.8577192  | 31.37287865 | 39.95323975 | 30.14057329 | 28.99309067 | 25.87178312 | 0.373022788  | 0.614308687  | 0.5184197    |
| <b>D7XGF3</b> | TY-2482_chromosome | + | 473456 | 473647 | 94.87332881 | 101.5793175 | 117.3414436 | 105.9878993 | 101.0805265 | 95.90585647 | 0.065334133  | 0.107248271  | 0.085154374  |
| <b>B7L6F3</b> | TY-2482_chromosome | + | 473675 | 474109 | 221.5518537 | 225.0292429 | 265.280089  | 232.1705324 | 223.7821072 | 241.8930766 | 0.058870689  | 0.087226434  | 0.06928737   |
| <b>B7L6F4</b> | TY-2482_chromosome | + | 474191 | 475594 | 277.4743817 | 237.3540082 | 257.2281453 | 502.3592446 | 526.5102906 | 562.9245786 | -1.009403843 | 14.59140496  | 14.00774137  |
| <b>B7L6F5</b> | TY-2482_chromosome | + | 475842 | 476984 | 333.3564406 | 290.3078751 | 387.2444986 | 136.9029991 | 125.7745409 | 118.3586682 | 1.468105005  | 19.66158971  | 19.01446765  |
| <b>B7L6F6</b> | TY-2482_chromosome | + | 477005 | 478015 | 173.9850886 | 173.0106764 | 176.6985871 | 71.46327483 | 85.43104675 | 70.02040522 | 1.207269655  | 11.66966499  | 11.13365603  |
| <b>B7L6F7</b> | TY-2482_chromosome | + | 478019 | 478957 | 109.201553  | 124.5744305 | 110.7834698 | 67.67166774 | 59.6622202  | 79.93837607 | 0.70180952   | 3.687152996  | 3.383505184  |
| <b>B7L6F8</b> | TY-2482_chromosome | + | 478950 | 479741 | 112.0220881 | 102.5594545 | 110.5941083 | 44.48961494 | 29.61552952 | 27.78740934 | 1.680386265  | 14.32622184  | 13.74753304  |
| <b>B7L6F9</b> | TY-2482_chromosome | + | 479766 | 481187 | 340.7390327 | 454.5688411 | 406.536326  | 125.0934348 | 112.7209476 | 83.04440093 | 1.836598007  | 31.27117692  | 30.4872455   |
| <b>B7L6G0</b> | TY-2482_chromosome | + | 481400 | 482206 | 813.7830332 | 1108.644327 | 956.9019616 | 152.1013564 | 711.9315351 | 763.0975957 | 0.528289575  | 3.894059683  | 3.584075903  |
| <b>C8TRH0</b> | TY-2482_chromosome | + | 482551 | 482739 | 216.2029843 | 217.0348964 | 95.25440695 | 310.4978859 | 376.9231973 | 352.2478664 | -1.103287078 | 5.552538429  | 5.168131072  |
| <b>B7L6G1</b> | TY-2482_chromosome | + | 482826 | 483071 | 105.3415683 | 91.98847778 | 99.17657281 | 410.8870576 | 482.2423888 | 519.9189087 | -2.219312886 | 42.43555108  | 41.55418034  |
| <b>B7L6G2</b> | TY-2482_chromosome | + | 483160 | 483390 | 1398.943335 | 1476.669818 | 1048.384193 | 1549.264842 | 1673.368925 | 1787.614912 | -0.418699325 | 2.424668279  | 2.18321505   |
| <b>B7L6G3</b> | TY-2482_chromosome | - | 483397 | 483843 | 462.0133272 | 549.4984783 | 455.7966436 | 497.7288228 | 459.5794536 | 582.2706129 | -0.120308937 | 0.226140452  |              |
| <b>B7L6G4</b> | TY-2482_chromosome | - | 483843 | 484592 | 730.5212698 | 868.767503  | 831.762016  | 529.7185153 | 494.8862624 | 507.2557103 | 0.636618737  | 8.558005683  | 8.088388064  |
| <b>B7L6G5</b> | TY-2482_chromosome | + | 484539 | 485573 | 768.6937508 | 1115.019128 | 1049.895947 | 350.3930944 | 328.9713303 | 300.5671655 | 1.52277991   | 32.1582083   | 31.36084679  |
| <b>D3GRI3</b> | TY-2482_chromosome | + | 485717 | 486436 | 221.4734489 | 247.8642454 | 237.0512519 | 154.6130568 | 189.0794335 | 165.0796235 | 0.452676496  | 2.637038013  | 2.383744548  |
| <b>B7L6G7</b> | TY-2482_chromosome | - | 486478 | 488577 | 450.2937526 | 468.6604948 | 468.2290432 | 447.6049387 | 570.9807953 | 517.9556536 | -0.162063314 | 0.816489155  | 0.67998175   |
| <b>B7L6G8</b> | TY-2482_chromosome | + | 488819 | 489877 | 228.078925  | 232.0644947 | 2460.801314 | 521.9644702 | 550.5252379 | 567.8477917 | 2.100968178  | 88.07875144  | 86.892326022 |
| <b>B7L6G9</b> | TY-2482_chromosome | - | 489996 | 491492 | 1219.044535 | 1147.728995 | 1281.326494 | 653.1178897 | 749.4214188 | 830.3035669 | 0.743325418  | 10.042703    | 9.535040216  |
| <b>B7L6H0</b> | TY-2482_chromosome | + | 491759 | 492373 | 89.8498888  | 95.36305448 | 104.5776886 | 28.15942064 | 43.50247373 | 24.37788342 | 1.594996202  | 11.72100972  | 11.18440255  |
| <b>B7L7F8</b> | TY-2482_chromosome | + | 493448 | 495589 | 25.66647571 | 57.60820673 | 34.71794892 | 24.69460782 | 30.11579872 | 36.66890111 | 0.201998858  | 0.560141508  | 0.469964877  |

|        |                    |   |        |        |             |             |             |             |             |             |               |             |              |
|--------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|--------------|
| B7L7F9 | TY-2482_chromosome | + | 495660 | 499898 | 187.0861061 | 175.9121938 | 206.5369877 | 206.4578463 | 223.5059362 | 251.0394084 | -0.216885613  | 0.959840909 | 0.827650116  |
| B7L7G3 | TY-2482_chromosome | - | 501681 | 502247 | 167.2662841 | 161.6843578 | 158.1898128 | 66.28221564 | 41.68891511 | 52.34211994 | 1.595147978   | 16.80792844 | 16.19423014  |
| B7L7G4 | TY-2482_chromosome | + | 502420 | 503262 | 253.2376089 | 388.517853  | 304.74461   | 98.17066396 | 87.50836988 | 105.8634129 | 1.600923948   | 20.98202769 | 20.31838157  |
| B7L7G5 | TY-2482_chromosome | + | 503364 | 504254 | 655.380482  | 709.6982205 | 693.9172153 | 407.8619937 | 372.4340645 | 359.6495    | 0.835207692   | 13.10713309 | 12.54779245  |
| B7L7G6 | TY-2482_chromosome | - | 504336 | 505013 | 80.1976215  | 81.01800821 | 101.4249246 | 61.80805162 | 62.08587747 | 61.14159929 | 0.540867561   | 1.89770188  | 1.689947612  |
| B7L7G7 | TY-2482_chromosome | - | 505013 | 505705 | 68.69955057 | 57.42169631 | 91.06782947 | 46.97547488 | 49.21811141 | 46.34051125 | 0.695884192   | 2.175220728 | 1.949263697  |
| B7L7G8 | TY-2482_chromosome | - | 505708 | 507249 | 154.3841944 | 159.601769  | 145.3543502 | 122.4405865 | 117.1220707 | 105.8672748 | 0.384574771   | 1.77237646  | 1.573651509  |
| B7L7G9 | TY-2482_chromosome | - | 507249 | 510986 | 306.2283364 | 358.3866993 | 347.5658643 | 314.3094997 | 289.607842  | 248.2808909 | 0.216637873   | 1.078659489 | 0.936204595  |
| B7L7H0 | TY-2482_chromosome | - | 511071 | 512456 | 130.4260491 | 151.8915436 | 135.1839919 | 124.5255179 | 146.6388251 | 151.8587603 | -0.052572849  | 0.056413311 | 0.044775003  |
| C6UU60 | TY-2482_chromosome | - | 514687 | 515565 | 171.1003499 | 144.5759145 | 115.794607  | 258.3909879 | 228.5550053 | 258.0024376 | -0.804046662  | 5.468161824 | 5.086067346  |
| B7L7H4 | TY-2482_chromosome | + | 515797 | 518841 | 3097.70826  | 3005.724185 | 2895.226507 | 19814.91421 | 15330.17803 | 15597.69476 | -2.506652514  | 12.0608222  | 11.51909678  |
| B7L7H5 | TY-2482_chromosome | + | 518857 | 519738 | 449.9019249 | 423.1133005 | 409.7082983 | 3641.734031 | 2939.772706 | 3431.369792 | -2.964668959  | 115.3689714 | 114.0668961  |
| B7L7H6 | TY-2482_chromosome | + | 519734 | 520384 | 239.5153666 | 178.4024225 | 197.0739694 | 2322.540697 | 2085.018586 | 2707.471731 | -3.477520328  | 141.2432944 | 139.8026984  |
| B7L7H7 | TY-2482_chromosome | - | 520441 | 520800 | 310.2871429 | 271.5783359 | 318.7106054 | 152.8316217 | 167.1676485 | 164.886903  | 0.936945005   | 9.361265302 | 8.870625093  |
| B7L7H8 | TY-2482_chromosome | - | 520872 | 521879 | 1640.997257 | 1430.828893 | 1454.193608 | 397.1228914 | 463.9854413 | 458.7612663 | 1.800316436   | 60.24546181 | 59.2320326   |
| B7L7H9 | TY-2482_chromosome | - | 522016 | 523710 | 10703.10672 | 10657.1339  | 11561.12356 | 6509.118722 | 6253.762468 | 6145.907641 | 0.814271672   | 1.880304684 | 1.674231559  |
| B7L7I1 | TY-2482_chromosome | + | 524667 | 525095 | 1941.948007 | 1801.588499 | 1793.221702 | 662.2722961 | 638.6689353 | 594.8670376 | 1.550059428   | 53.55445321 | 52.59337128  |
| B7L7I2 | TY-2482_chromosome | - | 525157 | 526080 | 217.4556889 | 201.2733007 | 197.0535605 | 140.5711079 | 144.1972934 | 126.1213265 | 0.583439389   | 3.704776657 | 3.399367426  |
| B7L7I3 | TY-2482_chromosome | - | 526076 | 527059 | 94.02593696 | 93.3123989  | 82.24781611 | 99.97721952 | 101.9011381 | 104.5888016 | -0.20594488   | 0.477929683 | 0.398121599  |
| B7L7I4 | TY-2482_chromosome | - | 527059 | 527952 | 101.2642338 | 143.4836488 | 91.22741979 | 100.2086026 | 104.3760264 | 111.6900942 | -0.036420368  | 0.103237018 | 0.081797949  |
| B7L7I5 | TY-2482_chromosome | - | 527952 | 528971 | 72.69831746 | 78.03275698 | 52.51177981 | 59.46445896 | 67.87734719 | 62.99102126 | 0.020978085   | 0.114510835 | 0.091280995  |
| B7L7I6 | TY-2482_chromosome | - | 528976 | 530523 | 69.65857834 | 86.15218929 | 119.4793527 | 68.92505427 | 65.51616709 | 74.4217505  | 0.443041139   | 1.185529521 | 1.031250779  |
| B7L7I7 | TY-2482_chromosome | - | 530540 | 531118 | 29.02115368 | 27.68458752 | 24.67783219 | 19.78790931 | 17.50765265 | 24.0093768  | 0.394403837   | 0.62119053  | 0.523671103  |
| B7L7I8 | TY-2482_chromosome | - | 531379 | 533775 | 482.9297449 | 560.2092339 | 443.0464941 | 309.0887764 | 288.4721863 | 291.2751286 | 0.676115213   | 7.800996727 | 7.352165112  |
| B7L7I9 | TY-2482_chromosome | - | 533803 | 535182 | 367.6039731 | 348.720427  | 420.4687657 | 285.5193366 | 254.519775  | 239.8174397 | 0.577837048   | 4.394179756 | 4.058952774  |
| B7L7J0 | TY-2482_chromosome | - | 535557 | 536873 | 241.5941317 | 236.1592118 | 187.4946434 | 348.9733779 | 361.7702041 | 355.8357519 | -0.7419011771 | 5.782939687 | 5.391090138  |
| B7L7J1 | TY-2482_chromosome | - | 537007 | 538539 | 125.4466697 | 137.2666207 | 130.7741153 | 114.9678452 | 146.6686438 | 159.5713095 | -0.10808614   | 0.240948438 | 0.197235416  |
| B7L7J2 | TY-2482_chromosome | - | 538698 | 540095 | 443.1793468 | 371.4377544 | 409.4997684 | 159.3231333 | 162.6281065 | 144.107045  | 1.425164335   | 23.79834001 | 23.09613909  |
| B7L7J3 | TY-2482_chromosome | - | 540460 | 543252 | 650.3636845 | 646.3507048 | 702.3268151 | 281.0995243 | 322.1107847 | 318.2994507 | 1.136734655   | 20.74260647 | 20.08175839  |
| B7L7J4 | TY-2482_chromosome | - | 543300 | 545669 | 373.6393729 | 341.8133541 | 366.3327306 | 135.5995124 | 157.7887038 | 175.1448452 | 1.236486566   | 17.29404408 | 16.67204576  |
| B7L7J5 | TY-2482_chromosome | - | 545710 | 547392 | 33.24130501 | 25.10994471 | 54.79950989 | 33.77928481 | 28.24758121 | 24.74490473 | 0.910398331   | 1.748486936 | 1.5511134599 |
| B7L7J6 | TY-2482_chromosome | - | 547686 | 548840 | 105.7431542 | 122.4156495 | 95.29222066 | 155.4676476 | 195.126613  | 193.7117026 | -0.806886539  | 4.483753802 | 4.14436543   |
| B7L7J7 | TY-2482_chromosome | - | 548895 | 550574 | 1290.607865 | 1396.268166 | 1207.238772 | 1190.288629 | 1266.819362 | 1093.348178 | 0.092281294   | 0.660584736 | 0.558577286  |
| B7L7K0 | TY-2482_chromosome | - | 552260 | 554536 | 447.8491031 | 566.8130736 | 515.7525176 | 177.343705  | 179.0144153 | 190.3521369 | 1.44106511    | 27.09880748 | 26.36005128  |
| B7L7K1 | TY-2482_chromosome | - | 554873 | 555784 | 258.5353661 | 280.2363085 | 245.9805512 | 44.12181794 | 58.27011762 | 59.36284249 | 2.249742366   | 39.31451643 | 38.45256597  |
| B7L7K2 | TY-2482_chromosome | - | 555846 | 556346 | 211.002953  | 191.3029423 | 198.3564333 | 26.24322393 | 41.04728817 | 56.90723531 | 2.310219389   | 30.29296097 | 29.51793041  |
| B7L7K3 | TY-2482_chromosome | - | 556362 | 556889 | 203.7979983 | 264.2298938 | 208.6690748 | 26.86076849 | 37.14353384 | 41.19977206 | 2.616263055   | 41.1614713  | 40.28601837  |
| B7L7K4 | TY-2482_chromosome | - | 556906 | 559554 | 615.8342747 | 543.6957486 | 629.056613  | 77.14140071 | 125.9401614 | 104.5695573 | 2.584896413   | 66.00734359 | 64.94555691  |
| B7L7K5 | TY-2482_chromosome | - | 559599 | 560315 | 352.868707  | 356.2990083 | 367.7202752 | 69.52506045 | 110.5177001 | 101.2064462 | 1.949553569   | 33.79293819 | 32.97604827  |
| B7L7K6 | TY-2482_chromosome | - | 560643 | 561251 | 7868.747157 | 8046.460491 | 9109.856824 | 5173.168816 | 4596.630588 | 5270.751155 | 0.757792816   | 1.725925397 | 1.529941349  |
| D7ZRJ7 | TY-2482_chromosome | - | 561924 | 562145 | 46.90310541 | 48.0601121  | 39.18879786 | 57.80310969 | 59.23858523 | 56.46755073 | -0.409721199  | 0.872687493 | 0.748212498  |
| B7L7K8 | TY-2482_chromosome | - | 562159 | 563478 | 645.9171107 | 705.9412107 | 766.8124234 | 621.8450786 | 552.4366597 | 636.5471819 | 0.234532388   | 1.343028276 | 1.178525758  |
| D7YRT1 | TY-2482_chromosome | - | 563481 | 563771 | 202.3786082 | 260.8985131 | 231.3237097 | 162.7599243 | 174.9837485 | 182.5719804 | 0.367629866   | 1.97376203  | 1.760924934  |
| B7L7L0 | TY-2482_chromosome | - | 563956 | 569374 | 225.5846645 | 320.8526015 | 292.8725148 | 216.8566523 | 206.6812449 | 169.9537403 | 0.434383504   | 2.644249111 | 2.39003399   |
| B7L7L1 | TY-2482_chromosome | - | 569908 | 571497 | 133.1165129 | 115.4928869 | 134.8785255 | 165.1064106 | 145.9929723 | 157.9229352 | -0.251628408  | 0.979974767 | 0.84541853   |
| B7L7L2 | TY-2482_chromosome | - | 571579 | 572529 | 216.4673254 | 232.2444711 | 226.9938765 | 198.3203992 | 167.0790473 | 161.0810426 | 0.34073741    | 1.680810396 | 1.488403873  |
| B7L7L3 | TY-2482_chromosome | + | 572778 | 574310 | 48.02599919 | 74.56595558 | 56.17972318 | 52.07246465 | 61.97264078 | 60.45232324 | -0.060988246  | 0           | 0            |
| B7L7L4 | TY-2482_chromosome | + | 574307 | 575332 | 55.16050994 | 47.87903136 | 55.91048504 | 49.12638846 | 44.86644368 | 40.01301864 | 0.274575104   | 0.515767585 | 0.430655489  |
| B7L7L5 | TY-2482_chromosome | + | 575335 | 576324 | 42.24292287 | 36.73333219 | 44.36183521 | 53.79666476 | 42.89573189 | 53.68550918 | -0.24662252   | 0.522263994 | 0.436349365  |
| B7L7L6 | TY-2482_chromosome | + | 576339 | 577358 | 107.1934067 | 121.9106811 | 89.6991107  | 98.43151784 | 104.7242246 | 95.97454579 | 0.020303183   | 0.141107455 | 0.114131116  |
| B7L7L7 | TY-2482_chromosome | + | 577388 | 578260 | 113.8997348 | 99.85624274 | 128.8349907 | 159.9288693 | 167.2065728 | 154.8986436 | -0.438565611  | 2.194906476 | 1.967923611  |
| B7L7L8 | TY-2482_chromosome | + | 578287 | 578574 | 43.68259529 | 65.04714758 | 75.30200534 | 81.98534144 | 88.78312306 | 65.40948788 | -0.375203647  | 0.899068557 | 0.772386364  |
| B7L7L9 | TY-2482_chromosome | + | 578634 | 579389 | 381.6671017 | 337.1943668 | 370.6236728 | 264.4069536 | 253.8908935 | 286.7274148 | 0.469504233   | 3.175595823 | 2.895290889  |
| B7L7M0 | TY-2482_chromosome | - | 579399 | 580310 | 187.2343625 | 194.9310308 | 203.8491281 | 241.0223649 | 348.4786272 | 359.9030472 | -0.681016729  | 4.71490367  | 4.364933956  |
| B7L7M1 | TY-2482_chromosome | - | 580520 | 581968 | 767.7514187 | 864.879773  | 860.4534852 | 1539.58855  | 1238.905588 | 1284.097192 | -0.724468992  | 9.64129338  | 9.144415928  |

|                |                    |   |        |        |             |             |             |             |             |             |              |             |              |
|----------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>E1HZE7</b>  | TY-2482_chromosome | - | 582116 | 582277 | 78.86743046 | 82.01570678 | 112.6010732 | 128.507745  | 117.3372422 | 112.4282628 | -0.341384848 | 1.245931264 | 1.090108635  |
| <b>B7L7M2</b>  | TY-2482_chromosome | - | 582198 | 583613 | 656.8768869 | 688.2245788 | 679.5720888 | 930.7585688 | 954.6168796 | 956.2303292 | -0.49605933  | 5.707613319 | 5.317903156  |
| <b>B7L7M3</b>  | TY-2482_chromosome | - | 583755 | 584111 | 118.4937391 | 103.9119651 | 119.1148897 | 311.2972642 | 295.0564131 | 262.7421551 | -1.317454519 | 15.32983931 | 14.73124537  |
| <b>B7L7M4</b>  | TY-2482_chromosome | - | 584114 | 585037 | 419.7697705 | 484.7059436 | 431.1962748 | 1053.714416 | 1085.622453 | 1051.859239 | -1.296277915 | 29.3648779  | 28.60261412  |
| <b>B7L7M5</b>  | TY-2482_chromosome | - | 585104 | 586489 | 628.308126  | 768.898002  | 758.3406653 | 673.9022249 | 699.2717381 | 649.7890608 | 0.06480802   | 0.344651035 | 0.285663685  |
| <b>B7L7M6</b>  | TY-2482_chromosome | + | 586590 | 587468 | 135.2504303 | 139.9050305 | 150.6234466 | 196.4590263 | 182.2674419 | 230.4926695 | -0.501507566 | 2.678884924 | 2.423246873  |
| <b>B7L8K7</b>  | TY-2482_chromosome | + | 588812 | 589999 | 451.5677875 | 438.4800729 | 405.4874982 | 265.1535725 | 331.3869213 | 406.4454432 | 0.371944713  | 1.992863742 | 1.77846162   |
| <b>B7L8K8</b>  | TY-2482_chromosome | - | 590030 | 590692 | 695.3224988 | 594.2687352 | 689.4493832 | 573.8905215 | 568.6335343 | 646.4027136 | 0.193727356  | 0.752253243 | 0.641128165  |
| <b>B7L8K9</b>  | TY-2482_chromosome | + | 590904 | 591335 | 261.9634951 | 281.9111638 | 271.5731343 | 664.3840115 | 792.1846288 | 779.210772  | -1.465953866 | 29.87051534 | 29.10165969  |
| <b>B7L8L0</b>  | TY-2482_chromosome | + | 591358 | 591738 | 580.3909182 | 573.8006702 | 609.0301555 | 1001.433957 | 1056.831447 | 978.0570097 | -0.772981453 | 12.9054221  | 12.34516988  |
| <b>B7L8L1</b>  | TY-2482_chromosome | + | 591773 | 591988 | 233.1615606 | 289.5462284 | 261.4952691 | 381.3431687 | 399.2330755 | 376.4013363 | -0.606294227 | 4.538295237 | 4.196428987  |
| <b>B7L8L2</b>  | TY-2482_chromosome | + | 592051 | 593493 | 113.7398579 | 115.8238921 | 107.9472367 | 135.7724075 | 133.0349025 | 155.2034777 | -0.339964525 | 1.209219063 | 1.056127855  |
| <b>B7L8L7</b>  | TY-2482_chromosome | + | 597527 | 598222 | 34.26161034 | 23.78897948 | 42.47339055 | 43.9124675  | 45.55867973 | 64.72748804 | -0.492901964 | 1.493962951 | 1.316564756  |
| <b>B7L8L8</b>  | TY-2482_chromosome | - | 598273 | 599169 | 150.9882717 | 217.4425042 | 219.2660933 | 242.1400502 | 209.5433746 | 198.8175745 | -0.289877908 | 0.431910548 | 0.359873656  |
| <b>B7L8L9</b>  | TY-2482_chromosome | + | 599364 | 600548 | 138.8752305 | 173.3528938 | 158.0081295 | 213.627163  | 204.637584  | 203.8034813 | -0.44758342  | 1.995504795 | 1.780817515  |
| <b>B7L8M0</b>  | TY-2482_chromosome | - | 600996 | 601883 | 280.7850968 | 247.5652786 | 260.1430618 | 549.1126455 | 655.0257601 | 630.4127717 | -1.192275573 | 19.49697334 | 18.85292868  |
| <b>B7L8M1</b>  | TY-2482_chromosome | - | 602141 | 602530 | 111.5415229 | 120.5113823 | 74.32525564 | 25.59647857 | 15.48267467 | 20.68455002 | 2.210242287  | 18.42745203 | 17.79326089  |
| <b>B7L8M2</b>  | TY-2482_chromosome | + | 602806 | 603321 | 54.63608297 | 81.90588618 | 68.90035647 | 70.19112462 | 77.30617634 | 62.50144695 | -0.10797918  | 0.079158718 | 0.06248714   |
| <b>B7L8M3</b>  | TY-2482_chromosome | - | 603372 | 605414 | 2924.643131 | 3325.708048 | 3314.365694 | 1662.787174 | 1550.804422 | 1455.738734 | 1.014850383  | 9.152884326 | 8.668658428  |
| <b>D3GSH5</b>  | TY-2482_chromosome | + | 605536 | 606294 | 6610.872237 | 7199.791259 | 7651.695661 | 5206.893231 | 4970.790986 | 5364.566189 | 0.469719597  | 0.899745927 | 0.772947254  |
| <b>B7L8M5</b>  | TY-2482_chromosome | + | 606386 | 607069 | 1666.413582 | 1793.743594 | 1820.195995 | 2862.611554 | 2894.144151 | 3290.443496 | -0.777064088 | 5.463117806 | 5.08123298   |
| <b>A1ABC3</b>  | TY-2482_chromosome | - | 607211 | 607480 | 193.0250592 | 183.1792257 | 167.0387522 | 355.561192  | 343.0346284 | 355.9069253 | -0.967579204 | 10.21175792 | 10.121175792 |
| <b>B7L8M7</b>  | TY-2482_chromosome | - | 607492 | 608949 | 251.6741454 | 244.1989111 | 227.2999749 | 142.7992695 | 154.8804981 | 159.9859354 | 0.652847381  | 4.943028621 | 4.583011275  |
| <b>B7L8M8</b>  | TY-2482_chromosome | - | 609041 | 610321 | 86.07743203 | 145.9296324 | 124.7449064 | 41.33032389 | 53.05680833 | 57.68920167 | 1.150441545  | 7.116043219 | 6.68891296   |
| <b>D3GTE7</b>  | TY-2482_chromosome | - | 610466 | 611482 | 176.806885  | 254.0500694 | 229.6722132 | 288.2192297 | 328.6845585 | 407.2204738 | -0.680650526 | 4.029470477 | 3.709775476  |
| <b>B7L5D3</b>  | TY-2482_chromosome | - | 611497 | 612708 | 185.4077786 | 175.353482  | 199.4430635 | 97.32800761 | 88.04113893 | 126.8561037 | 0.881011357  | 6.063510885 | 5.664961462  |
| <b>D3GTE9</b>  | TY-2482_chromosome | - | 612917 | 613249 | 98.51453578 | 146.070225  | 113.6719644 | 112.8811833 | 121.2461555 | 104.0463007 | -0.013144116 | 0.111048226 | 0.088532159  |
| <b>B7L5D5</b>  | TY-2482_chromosome | + | 613375 | 613713 | 1830.130273 | 1827.767157 | 1791.708615 | 2301.822583 | 2128.788139 | 2212.08863  | -0.290388312 | 2.051094009 | 1.834118705  |
| <b>B7L5D6</b>  | TY-2482_chromosome | + | 613751 | 614308 | 1966.493936 | 1873.539238 | 1887.95794  | 2650.232003 | 2592.096968 | 2772.624316 | -0.475958656 | 3.075612392 | 2.800091766  |
| <b>B5Z420</b>  | TY-2482_chromosome | - | 614317 | 615060 | 655.1122668 | 635.5296592 | 686.5859036 | 561.6768149 | 575.3188071 | 681.189077  | 0.145629971  | 0.559298898 | 0.469336364  |
| <b>Q6EWWW5</b> | TY-2482_chromosome | + | 615129 | 615434 | 947.3323315 | 963.9758607 | 823.7588168 | 509.8552018 | 556.497873  | 474.6046241 | 0.792791311  | 12.89504398 | 12.3397842   |
| <b>B7L5D9</b>  | TY-2482_chromosome | + | 615636 | 618059 | 455.5594671 | 488.7852244 | 508.3879997 | 501.5099507 | 473.7295334 | 532.9940543 | -0.051912008 | 0.18765724  | 0.151762684  |
| <b>B7L5E0</b>  | TY-2482_chromosome | + | 618123 | 620543 | 234.6359804 | 302.7208289 | 234.5989326 | 330.3359915 | 318.1355248 | 288.6209655 | -0.364494945 | 1.383532152 | 1.215200977  |
| <b>Q8KU25</b>  | TY-2482_chromosome | + | 621078 | 621710 | 531.5060629 | 533.3116261 | 523.062543  | 0           | 0           | 0           | 13.14019399  | 195.6072171 | 193.9658474  |
| <b>D7JRD8</b>  | TY-2482_chromosome | + | 622250 | 623083 | 96.41018057 | 97.43666019 | 118.7170953 | 0           | 0           | 0           | 118.3348815  | 50.6638168  | 49.72065449  |
| <b>B3IP95</b>  | TY-2482_chromosome | + | 623600 | 624100 | 124.9549586 | 179.0755827 | 183.3175113 | 0           | 0           | 0           | 11.40908821  | 67.80208248 | 66.73219684  |
| <b>C8UML1</b>  | TY-2482_chromosome | - | 624507 | 632855 | 2037.196847 | 2363.434546 | 2255.614426 | 0           | 0           | 0           | 15.18563309  | 325.0237216 | 323.0330172  |
| <b>C8UML0</b>  | TY-2482_chromosome | - | 632927 | 634189 | 121.5431487 | 176.7873435 | 162.087838  | 0           | 0           | 0           | 11.30174567  | 65.2733649  | 64.21656443  |
| <b>C8U7H9</b>  | TY-2482_chromosome | - | 635661 | 636059 | 375.3957512 | 286.1144123 | 242.3153991 | 0           | 0           | 0           | 12.33707683  | 104.7295603 | 103.4815348  |
| <b>C8UMK2</b>  | TY-2482_chromosome | - | 638227 | 639492 | 119.1021871 | 102.2956937 | 155.6538366 | 0           | 0           | 0           | 11.15707088  | 56.98185593 | 55.99874871  |
| <b>C6UNY7</b>  | TY-2482_chromosome | - | 639492 | 641192 | 106.4168851 | 134.7757595 | 124.8944895 | 0           | 0           | 0           | 10.98813034  | 56.51389926 | 55.5374353   |
| <b>C8UMJ7</b>  | TY-2482_chromosome | - | 642326 | 644230 | 115.131366  | 188.3052985 | 145.200851  | 0           | 0           | 0           | 11.2139088   | 60.09851995 | 59.08688164  |
| <b>C8U7J2</b>  | TY-2482_chromosome | - | 646383 | 647594 | 139.8488677 | 143.8209696 | 138.0311729 | 0           | 0           | 0           | 11.22085864  | 66.38263335 | 65.31883605  |
| <b>B7MPY7</b>  | TY-2482_chromosome | - | 647620 | 648624 | 77.04009038 | 80.53798355 | 99.96163446 | 0           | 0           | 0           | 10.55419717  | 42.50355774 | 41.62086092  |
| <b>B5YYP6</b>  | TY-2482_chromosome | - | 648785 | 650926 | 435.9662761 | 496.1237994 | 442.703439  | 0           | 0           | 0           | 12.89938156  | 164.6771281 | 163.1461709  |
| <b>C8UMI9</b>  | TY-2482_chromosome | - | 650929 | 652632 | 288.230374  | 369.0829816 | 282.0731563 | 0           | 0           | 0           | 12.30473438  | 114.5781295 | 113.2846886  |
| <b>Q07682</b>  | TY-2482_chromosome | + | 654031 | 654609 | 119.3858124 | 63.18119157 | 117.2738855 | 0           | 0           | 0           | 10.88689865  | 43.87822304 | 42.9840879   |
| <b>B7MPX6</b>  | TY-2482_chromosome | - | 656912 | 658849 | 485.8362304 | 527.8808875 | 410.1449805 | 10.77840803 | 14.24643557 | 6.542771702 | 5.416227746  | 162.0628941 | 160.5464631  |
| <b>Q9FB11</b>  | TY-2482_chromosome | + | 658955 | 659266 | 14561.61305 | 12074.53996 | 4657.540412 | 484.6587111 | 645.0826215 | 265.9567875 | 4.354154475  | 23.17071178 | 22.47804664  |
| <b>C6UP10</b>  | TY-2482_chromosome | - | 659588 | 660019 | 115.6003294 | 121.625232  | 119.2584742 | 0           | 0           | 0           | 10.97996044  | 57.86930639 | 56.87432319  |
| <b>B7MPW6</b>  | TY-2482_chromosome | - | 661535 | 662203 | 130.1397384 | 158.5287934 | 111.309435  | 0           | 0           | 0           | 11.06738126  | 58.23120708 | 57.23363622  |
| <b>C8TS13</b>  | TY-2482_chromosome | + | 662589 | 662914 | 437.7752093 | 482.6105099 | 496.8830406 | 0           | 0           | 0           | 12.97532073  | 170.6333214 | 169.074926   |
| <b>C8TS14</b>  | TY-2482_chromosome | + | 662910 | 663224 | 445.5533124 | 490.9853202 | 434.1610224 | 0           | 0           | 0           | 12.89721401  | 165.5242512 | 163.9903295  |
| <b>D6I789</b>  | TY-2482_chromosome | - | 663281 | 663763 | 3153.543825 | 3540.776811 | 3214.13856  | 0           | 0           | 0           | 15.75316056  | 325.0237216 | 323.0330172  |
| <b>Q8X288</b>  | TY-2482_chromosome | - | 664174 | 664383 | 25377.11513 | 20044.19882 | 21776.70099 | 16372.19435 | 15694.41842 | 13574.58602 | 0.593009841  | 0.941112853 | 0.810805183  |

|               |                    |   |        |        |             |             |             |             |             |             |              |              |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| <b>C6UV05</b> | TY-2482_chromosome | - | 664795 | 665436 | 464.8160322 | 481.3456241 | 434.1967    | 0           | 0           | 0           | 12.91874437  | 167.9424425  | 166.399504  |
| <b>C8U729</b> | TY-2482_chromosome | - | 665847 | 666614 | 137.968959  | 120.6822562 | 137.8010558 | 0           | 0           | 0           | 11.17864836  | 63.26095282  | 62.21781667 |
| <b>B7MPV8</b> | TY-2482_chromosome | - | 667390 | 668469 | 110.2001318 | 84.70701892 | 111.7724087 | 0           | 0           | 0           | 10.84252834  | 49.82648189  | 48.89387587 |
| <b>P03034</b> | TY-2482_chromosome | + | 669459 | 670169 | 4949.648687 | 5470.237504 | 5358.941086 | 0           | 0           | 0           | 16.4416715   | 273.5770964  | 271.7300802 |
| <b>B7MPV3</b> | TY-2482_chromosome | + | 670219 | 670758 | 2427.215472 | 2747.598069 | 2677.980229 | 0           | 0           | 0           | 15.43123899  | 325.0237216  | 323.0330172 |
| <b>B7MPV2</b> | TY-2482_chromosome | + | 670749 | 671522 | 3176.370873 | 3640.177359 | 3268.738336 | 0           | 0           | 0           | 15.77398295  | 325.0237216  | 323.0330172 |
| <b>C8U8P7</b> | TY-2482_chromosome | + | 674945 | 677014 | 316.9638267 | 345.8082913 | 287.7996105 | 0           | 0           | 0           | 12.35929274  | 123.4456211  | 122.0917388 |
| <b>Q9LA41</b> | TY-2482_chromosome | + | 677316 | 678098 | 111.8622109 | 161.5046626 | 157.6015232 | 0           | 0           | 0           | 11.22085864  | 61.637897    | 60.61448357 |
| <b>C6V295</b> | TY-2482_chromosome | + | 678098 | 678775 | 127.3193585 | 147.6700442 | 142.152798  | 0           | 0           | 0           | 11.19285612  | 64.7512003   | 63.69736432 |
| <b>C8U2L7</b> | TY-2482_chromosome | + | 679339 | 680499 | 871.6735273 | 1001.773662 | 915.3048114 | 0           | 0           | 0           | 13.92291927  | 275.4147026  | 273.5552772 |
| <b>A1ABD5</b> | TY-2482_chromosome | + | 680851 | 681942 | 328.1094604 | 470.9657169 | 440.7596412 | 525.8729237 | 501.5025401 | 549.0112046 | -0.397887312 | 2.062053757  | 1.843786123 |
| <b>B7L5E3</b> | TY-2482_chromosome | + | 681988 | 682599 | 556.6314772 | 642.9001035 | 660.5965001 | 830.1532895 | 704.3849297 | 753.98914   | -0.312175273 | 2.075268176  | 1.855992731 |
| <b>B7L5E4</b> | TY-2482_chromosome | + | 682797 | 684050 | 658.8055458 | 742.2996702 | 724.0313459 | 1407.28732  | 1141.442521 | 1266.441855 | -0.865421112 | 13.39972127  | 12.8356238  |
| <b>B7L5E5</b> | TY-2482_chromosome | - | 684009 | 684701 | 3480.448684 | 3805.13612  | 3989.513901 | 5117.449428 | 3543.321609 | 3998.046716 | -0.175036847 | 0.390279939  | 0.322738255 |
| <b>B7L5E6</b> | TY-2482_chromosome | - | 684829 | 686046 | 2223.080156 | 2105.710051 | 1970.107757 | 2027.782558 | 1372.805986 | 1399.65999  | 0.373922908  | 2.488222093  | 2.242959907 |
| <b>B7L5E7</b> | TY-2482_chromosome | - | 686184 | 687074 | 232.5725187 | 261.9980775 | 217.3478076 | 161.2558504 | 157.6818685 | 157.3542158 | 0.529222263  | 3.658509244  | 3.355561061 |
| <b>B7L5E8</b> | TY-2482_chromosome | + | 687181 | 688431 | 958.7149119 | 927.8252354 | 880.9775182 | 788.5194537 | 686.8154506 | 736.561047  | 0.315429293  | 2.646298105  | 2.391912075 |
| <b>B5Z433</b> | TY-2482_chromosome | + | 688831 | 689163 | 54.11133157 | 88.98932755 | 42.64424034 | 52.66069416 | 50.09933903 | 53.97109226 | 0.055701567  | 0.374419714  | 0.309411548 |
| <b>B7L5F0</b> | TY-2482_chromosome | + | 689442 | 690260 | 1957.679489 | 2286.379135 | 2275.570191 | 995.2606408 | 948.918954  | 984.7685591 | 1.135863981  | 24.64757823  | 23.93473012 |
| <b>B7L5F1</b> | TY-2482_chromosome | - | 690305 | 690631 | 327.244788  | 375.139615  | 359.1343258 | 313.5580117 | 363.005819  | 397.488941  | -0.033356721 | 0.059795881  | 0.047352579 |
| <b>B7L5F2</b> | TY-2482_chromosome | - | 690621 | 690983 | 291.1659936 | 300.201715  | 305.9475756 | 418.3690565 | 422.4057311 | 444.4559431 | -0.516436016 | 4.400448335  | 4.065033062 |
| <b>B7L5F3</b> | TY-2482_chromosome | + | 691395 | 692426 | 879.7958159 | 1018.007871 | 915.3471692 | 542.6419164 | 351.1094003 | 433.0470697 | 1.039633375  | 15.881292978 | 15.27707689 |
| <b>B7L5F4</b> | TY-2482_chromosome | - | 692457 | 693842 | 5667.651111 | 5656.10543  | 5758.392387 | 3648.752774 | 3322.237404 | 3271.169593 | 0.73808097   | 1.961883344  | 1.749897528 |
| <b>B7L5F5</b> | TY-2482_chromosome | - | 693856 | 695385 | 5331.643411 | 5705.667403 | 6055.524507 | 4011.63946  | 3649.672918 | 3359.289086 | 0.631472944  | 1.520757732  | 1.341745649 |
| <b>B7L5F6</b> | TY-2482_chromosome | + | 695909 | 696850 | 2764.722953 | 2837.504967 | 2655.294353 | 1367.599848 | 1320.294554 | 923.4529126 | 1.164021492  | 19.26939004  | 18.62687593 |
| <b>B7L5F7</b> | TY-2482_chromosome | + | 697039 | 698418 | 579.6434051 | 577.5367281 | 533.0472021 | 1366.621864 | 1746.870729 | 1515.883834 | -1.498922325 | 37.23104015  | 36.38341181 |
| <b>B7L5F8</b> | TY-2482_chromosome | + | 698458 | 699177 | 700.9636643 | 749.7898005 | 774.2095274 | 650.0884148 | 695.0046436 | 686.0083905 | 0.131622356  | 0.658790962  | 0.557003519 |
| <b>B7L5F9</b> | TY-2482_chromosome | - | 699180 | 699512 | 273.6340784 | 304.6917084 | 312.9788227 | 288.7371962 | 288.1049431 | 303.5550516 | 0.012606987  | 0.037878752  | 0.030066069 |
| <b>D3GTJ4</b> | TY-2482_chromosome | + | 699605 | 700357 | 472.2419806 | 402.941179  | 399.7416629 | 523.5055962 | 486.6127144 | 468.783557  | -0.20141551  | 1.042250306  | 0.902444292 |
| <b>B7L5G1</b> | TY-2482_chromosome | + | 700364 | 701662 | 650.1306677 | 665.4226297 | 620.8894555 | 618.9200468 | 632.1057566 | 584.8268423 | 0.058717188  | 0.294790493  | 0.243421966 |
| <b>B7L5G2</b> | TY-2482_chromosome | + | 701741 | 702667 | 412.6483687 | 385.361995  | 398.0225876 | 321.087949  | 329.436856  | 324.0488775 | 0.308508729  | 1.824000436  | 1.621963405 |
| <b>B7L5G3</b> | TY-2482_chromosome | - | 702670 | 704070 | 1039.880895 | 1410.621347 | 1334.453365 | 728.8179167 | 764.6463626 | 619.351125  | 0.789458178  | 11.13687961  | 10.60827947 |
| <b>B7L5G4</b> | TY-2482_chromosome | - | 704216 | 705859 | 6652.658277 | 6557.094474 | 6978.042007 | 6329.170653 | 6199.314717 | 4903.900204 | 0.216334269  | 0.308189351  | 0.254254873 |
| <b>B7L5G5</b> | TY-2482_chromosome | + | 706058 | 707230 | 3077.037867 | 3074.104706 | 3355.930683 | 4008.573876 | 3691.902203 | 3700.805873 | -0.247614264 | 0.769914591  | 0.656360519 |
| <b>B7L5G6</b> | TY-2482_chromosome | + | 707334 | 708839 | 11715.78745 | 11574.84107 | 13217.49993 | 6531.266789 | 6219.896451 | 5725.751234 | 1.004951757  | 2.56506598   | 2.315188506 |
| <b>B7L5G7</b> | TY-2482_chromosome | - | 708890 | 710152 | 21.35208535 | 19.48720672 | 25.56472186 | 42.27236761 | 49.90761086 | 45.00001971 | -1.002685888 | 3.251137515  | 2.966330351 |
| <b>B7L5G8</b> | TY-2482_chromosome | - | 710194 | 711564 | 16.57206168 | 11.0984953  | 23.78380651 | 33.36627575 | 49.4130497  | 55.20180059 | -1.277535575 | 4.846087671  | 4.489840783 |
| <b>B7L5G9</b> | TY-2482_chromosome | - | 711564 | 713372 | 55.74945844 | 53.92283378 | 71.24589926 | 118.6789921 | 129.5392687 | 145.1199216 | -1.065368423 | 7.107620817  | 6.680955542 |
| <b>B7L5H0</b> | TY-2482_chromosome | - | 713764 | 714351 | 960.762252  | 1083.598286 | 896.974605  | 1398.01949  | 1278.085235 | 1156.766994 | -0.439698388 | 3.398822597  | 3.10742869  |
| <b>B7L5H1</b> | TY-2482_chromosome | - | 714583 | 715347 | 1453.809431 | 1262.708219 | 1164.29075  | 964.2999816 | 1025.812282 | 943.9815042 | 0.404360512  | 3.834146252  | 3.524683089 |
| <b>B7L5H2</b> | TY-2482_chromosome | - | 715462 | 716487 | 837.638845  | 1058.087777 | 828.0201232 | 745.8347732 | 572.524828  | 574.8858065 | 0.438733375  | 4.331354376  | 4.00043572  |
| <b>B7L5H3</b> | TY-2482_chromosome | + | 716662 | 718251 | 782.4299839 | 606.1224659 | 663.9639551 | 751.6805869 | 582.9787931 | 604.9606798 | 0.118963217  | 0.320564517  | 0.264754461 |
| <b>B7L5H4</b> | TY-2482_chromosome | + | 718264 | 719433 | 992.4154044 | 795.3099183 | 919.4570218 | 1090.050088 | 1137.927596 | 1215.370489 | -0.380212261 | 3.886285008  | 3.573974002 |
| <b>B7L5H5</b> | TY-2482_chromosome | + | 719540 | 720538 | 3677.848805 | 3489.514844 | 3372.248713 | 4274.243121 | 3665.683659 | 3738.932947 | -0.152566867 | 0.355575284  | 0.29449013  |
| <b>B7L5H6</b> | TY-2482_chromosome | - | 720579 | 721616 | 2070.750417 | 1910.030526 | 2239.483876 | 1494.130769 | 1440.854116 | 1411.325187 | 0.553874821  | 5.620781621  | 5.233624887 |
| <b>B7L5H7</b> | TY-2482_chromosome | + | 721784 | 721981 | 738.9545219 | 626.5387464 | 672.4837851 | 942.5661171 | 833.5526193 | 1171.96142  | -0.492494942 | 4.676307469  | 4.328280911 |
| <b>D6JA38</b> | TY-2482_chromosome | + | 722333 | 722333 | 417.8923062 | 412.9411719 | 445.1953809 | 1128.39338  | 1001.97573  | 1077.298634 | -1.315719353 | 32.018331    | 31.22368894 |
| <b>B7L5H8</b> | TY-2482_chromosome | + | 722257 | 722469 | 229.8404572 | 264.9629904 | 267.0116438 | 1109.581088 | 994.854847  | 1074.115471 | -2.075394316 | 61.62663209  | 60.60413585 |
| <b>B7L5H9</b> | TY-2482_chromosome | + | 722558 | 722995 | 462.2379602 | 576.5080011 | 481.5677625 | 2849.732629 | 2873.428425 | 2911.029653 | -2.566735724 | 91.79921925  | 90.59648901 |
| <b>B7L5I0</b> | TY-2482_chromosome | + | 723075 | 723653 | 229.5420016 | 272.1910323 | 225.8947888 | 1438.993515 | 1826.20693  | 1822.632375 | -2.854209925 | 95.59295007  | 94.37611812 |
| <b>B7L5I1</b> | TY-2482_chromosome | + | 723656 | 724231 | 271.1572916 | 213.6191401 | 285.4486166 | 1524.005912 | 1819.984214 | 1678.989155 | -2.628700864 | 98.49163095  | 97.26464809 |
| <b>B7L5I2</b> | TY-2482_chromosome | + | 724227 | 726446 | 1239.664375 | 1070.874441 | 1159.469753 | 2398.25471  | 2565.671191 | 2082.016042 | -0.996551077 | 17.21657248  | 16.59639205 |
| <b>B7L5I3</b> | TY-2482_chromosome | + | 726450 | 727505 | 1114.255247 | 953.1431731 | 954.2931606 | 584.2831767 | 646.1872935 | 585.821211  | 0.751754092  | 11.21502579  | 10.68495396 |
| <b>B7L5I4</b> | TY-2482_chromosome | + | 727512 | 728129 | 1308.017078 | 1127.077693 | 1267.100243 | 336.9108994 | 369.6170758 | 337.6948997 | 1.862765067  | 65.63231859  | 64.57253327 |
| <b>A7ZM93</b> | TY-2482_chromosome | - | 728423 | 729130 | 1180.086136 | 1167.812383 | 1209.661    | 337.4820469 | 617.1015167 | 307.7055155 | 1.890761121  | 73.67439434  | 72.56270707 |

|               |                    |   |        |        |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>D3GUC8</b> | TY-2482_chromosome | + | 729594 | 729791 | 32.99647901 | 48.04318289 | 33.36254257 | 22.2814327  | 29.96668532 | 42.33684811 | 0.189617061  | 0.380212629 | 0.314414487 |
| <b>B7L5I7</b> | TY-2482_chromosome | + | 730077 | 731576 | 6273.53782  | 5642.332408 | 6106.055015 | 2422.693584 | 2475.62817  | 2125.423386 | 1.381124089  | 9.85677415  | 9.353845632 |
| <b>B7L5I8</b> | TY-2482_chromosome | + | 731685 | 732287 | 1179.104674 | 1359.143032 | 1370.40675  | 1935.709668 | 1909.998848 | 1898.058624 | -0.570143517 | 6.366100827 | 5.95763809  |
| <b>B7L5I9</b> | TY-2482_chromosome | - | 732337 | 733197 | 1451.767998 | 1554.372636 | 1528.65762  | 1164.517073 | 1106.310318 | 1124.167925 | 0.405477818  | 4.610777721 | 4.265457056 |
| <b>B7L5J0</b> | TY-2482_chromosome | - | 733259 | 734530 | 6160.594601 | 6611.254977 | 7056.899492 | 8059.302402 | 7299.347513 | 6981.725198 | -0.171664607 | 0.234464256 | 0.192244412 |
| <b>B7L5J1</b> | TY-2482_chromosome | - | 734662 | 735315 | 1372.022269 | 1379.158831 | 1469.582428 | 1371.593092 | 1216.123245 | 1216.028534 | 0.157807091  | 0.871320348 | 0.746961212 |
| <b>B7L5J2</b> | TY-2482_chromosome | - | 735377 | 735703 | 222.3380989 | 188.240637  | 216.8349595 | 206.910249  | 193.2128548 | 196.4672578 | 0.112406554  | 0.228667054 | 0.187161256 |
| <b>B7L5J3</b> | TY-2482_chromosome | - | 735804 | 736910 | 1012.433031 | 899.2191592 | 1038.511398 | 967.038231  | 903.5668209 | 933.1411627 | 0.111722273  | 0.351214466 | 0.290629708 |
| <b>E7URP8</b> | TY-2482_chromosome | + | 737184 | 737896 | 14051.41107 | 14168.21268 | 15619.80456 | 11510.26688 | 10999.27604 | 12140.58508 | 0.35971819   | 0.498867486 | 0.416332598 |
| <b>B7L5J6</b> | TY-2482_chromosome | + | 738333 | 738566 | 129.0461436 | 174.367913  | 131.1327644 | 298.5565822 | 371.170191  | 397.9998431 | -1.377451083 | 14.24025403 | 13.66255339 |
| <b>B7L5J7</b> | TY-2482_chromosome | + | 738572 | 739426 | 241.8613981 | 237.6580482 | 210.1841256 | 679.9264308 | 812.3172102 | 803.1774046 | -1.750200014 | 38.03155242 | 37.17713327 |
| <b>B7L5J8</b> | TY-2482_chromosome | - | 739429 | 741438 | 640.0190051 | 580.1966251 | 593.5007462 | 904.2179911 | 1009.976381 | 931.657275  | -0.634553181 | 8.76880431  | 8.294025674 |
| <b>B7L5J9</b> | TY-2482_chromosome | + | 741445 | 741963 | 716.8242725 | 633.881401  | 793.9942547 | 650.3980993 | 590.9455422 | 596.4470881 | 0.27432197   | 1.385831967 | 1.217244344 |
| <b>B7L5K0</b> | TY-2482_chromosome | - | 742047 | 742904 | 1697.350781 | 1816.70919  | 1907.72515  | 1613.565196 | 1439.195289 | 1563.05625  | 0.233659174  | 1.48684821  | 1.310103975 |
| <b>B7L5K1</b> | TY-2482_chromosome | - | 742992 | 743399 | 260.5924576 | 326.0704686 | 261.8410341 | 97.0608421  | 91.21738512 | 95.77403131 | 1.50800187   | 21.11500227 | 20.44974914 |
| <b>C8UB70</b> | TY-2482_chromosome | + | 743331 | 743927 | 98.51392872 | 133.756555  | 123.3756956 | 212.0714334 | 239.7618795 | 244.2724681 | -1.012579139 | 7.771891312 | 7.323792684 |
| <b>B7L5K3</b> | TY-2482_chromosome | + | 743967 | 745061 | 822.7889713 | 814.2069443 | 942.0435798 | 773.1137803 | 756.5970557 | 710.4837451 | 0.229105221  | 1.302772732 | 1.141939439 |
| <b>B7L5K4</b> | TY-2482_chromosome | + | 745145 | 745549 | 2598.09235  | 3003.809729 | 3084.353895 | 2485.648791 | 2352.05948  | 2458.008096 | 0.240862023  | 0.886925882 | 0.761290603 |
| <b>B7L5K5</b> | TY-2482_chromosome | + | 745655 | 746299 | 496.7227284 | 430.5999206 | 431.293605  | 1294.380438 | 1476.647819 | 1355.229103 | -1.585555521 | 44.87480205 | 43.97240749 |
| <b>B7L5K6</b> | TY-2482_chromosome | + | 746395 | 751008 | 1382.733997 | 1209.428723 | 1298.836868 | 1575.277909 | 1604.636157 | 1567.036904 | -0.259272281 | 2.224898814 | 1.99674059  |
| <b>B7L5K7</b> | TY-2482_chromosome | - | 751065 | 751409 | 4568.943555 | 5165.738312 | 4085.234161 | 4230.308056 | 4244.202234 | 4450.689921 | 0.037332731  | 0.131328764 | 0.105798386 |
| <b>B7L5K8</b> | TY-2482_chromosome | + | 751743 | 752555 | 352.9232479 | 395.8293527 | 340.8220871 | 633.7268238 | 601.8065581 | 534.3417674 | -0.747916866 | 7.753349407 | 7.30598253  |
| <b>B7L5K9</b> | TY-2482_chromosome | + | 752686 | 753264 | 23563.92154 | 21884.64919 | 22306.77405 | 17537.96943 | 15460.29969 | 14596.80913 | 0.515473262  | 0.8305471   | 0.710338407 |
| <b>B7L5L0</b> | TY-2482_chromosome | - | 753416 | 754582 | 315.6964574 | 333.459372  | 346.0759163 | 984.5952303 | 1210.514813 | 1232.9067   | -1.776509595 | 47.62091252 | 46.69939912 |
| <b>D6JAZ2</b> | TY-2482_chromosome | + | 754924 | 755145 | 352.2582979 | 367.0311456 | 272.382588  | 563.7454652 | 751.816939  | 609.6524829 | -1.015756358 | 10.89829549 | 10.37349855 |
| <b>B7L5L1</b> | TY-2482_chromosome | + | 755136 | 756158 | 1181.56726  | 1055.161019 | 1252.474353 | 2325.227099 | 2472.466686 | 2437.290189 | -1.006878681 | 19.59608346 | 18.95050283 |
| <b>B7L5L2</b> | TY-2482_chromosome | - | 756161 | 757090 | 348.2319799 | 332.6041417 | 417.4452204 | 528.0175678 | 496.5130169 | 524.892445  | -0.449493736 | 3.881312803 | 3.569180335 |
| <b>B7L5L3</b> | TY-2482_chromosome | + | 757203 | 758411 | 485.2266361 | 358.7449253 | 458.1052929 | 1098.369283 | 770.2435626 | 641.7074481 | -0.891185207 | 8.514579468 | 8.045986734 |
| <b>B7L5L4</b> | TY-2482_chromosome | + | 758705 | 759850 | 2560.379673 | 2744.144518 | 2838.776297 | 3341.034815 | 3216.451928 | 3424.471232 | -0.293641035 | 0.954335141 | 0.822380186 |
| <b>B7L5L5</b> | TY-2482_chromosome | - | 759896 | 760534 | 2414.122144 | 2697.574848 | 2594.717302 | 2945.3852   | 2746.44654  | 2887.077789 | -0.175506245 | 0.458486824 | 0.382408071 |
| <b>B7L5L6</b> | TY-2482_chromosome | + | 760749 | 762119 | 840.2525293 | 864.7771832 | 783.328684  | 2127.871674 | 2423.191712 | 2310.22117  | -1.483346562 | 37.22326274 | 36.3274651  |
| <b>B7L5L7</b> | TY-2482_chromosome | - | 762166 | 763419 | 2245.296322 | 2537.60448  | 2613.13495  | 1180.464771 | 1063.834522 | 868.6186182 | 1.230383202  | 23.79068856 | 23.08892566 |
| <b>valV</b>   | TY-2482_chromosome | + | 763727 | 763803 | 172.481729  | 143.8409032 | 105.9398587 | 723.4016558 | 1040.855745 | 1073.979279 | -2.763729404 | 54.60667409 | 53.64159677 |
| <b>valW</b>   | TY-2482_chromosome | + | 763808 | 763884 | 210.077629  | 173.3711672 | 145.9050017 | 1012.84059  | 1333.734166 | 1507.458447 | -2.857199865 | 72.7979374  | 71.69294889 |
| <b>Q1RBD0</b> | TY-2482_chromosome | + | 763840 | 764265 | 1059.90957  | 1136.492634 | 1046.134807 | 3072.168991 | 3598.439025 | 4261.914973 | -1.766362587 | 21.7079955  | 21.0324666  |
| <b>B7L5L9</b> | TY-2482_chromosome | + | 764423 | 766024 | 754.4054939 | 731.0404592 | 838.6699816 | 443.1496937 | 528.442455  | 567.3545244 | 0.631696153  | 6.529357762 | 6.117764155 |
| <b>B7L5M0</b> | TY-2482_chromosome | - | 766042 | 766851 | 177.1534466 | 191.0184768 | 161.3110756 | 245.2162364 | 238.8368777 | 266.9152112 | -0.541091497 | 3.042163351 | 2.768740304 |
| <b>B7L5M1</b> | TY-2482_chromosome | - | 766858 | 767640 | 141.2254286 | 138.5922743 | 129.5526016 | 192.6156739 | 174.2051895 | 182.7112294 | -0.4369725   | 2.037272924 | 1.820727544 |
| <b>E6AKY5</b> | TY-2482_chromosome | - | 767640 | 769016 | 143.326139  | 154.4856896 | 150.8422359 | 396.5194776 | 335.3301453 | 402.2647965 | -1.349364128 | 18.11518126 | 17.48434953 |
| <b>B7L5M5</b> | TY-2482_chromosome | - | 769023 | 771122 | 225.2362618 | 289.5847612 | 269.9646478 | 753.5630812 | 601.665958  | 715.6210093 | -1.442124805 | 23.49918735 | 22.80178049 |
| <b>B7L5M6</b> | TY-2482_chromosome | - | 771146 | 771769 | 141.987837  | 173.2494993 | 153.806039  | 400.6288256 | 323.2863589 | 345.9811932 | -1.238749588 | 14.06671056 | 13.49163406 |
| <b>B7L5M7</b> | TY-2482_chromosome | - | 772228 | 772434 | 509.7108785 | 670.9054276 | 589.0863291 | 473.8463474 | 535.606915  | 643.7221544 | 0.050685943  | 0.28918732  | 0.238686794 |
| <b>B7L5M8</b> | TY-2482_chromosome | + | 772991 | 774400 | 8147.901227 | 7813.52976  | 8526.796957 | 14097.71658 | 12742.45597 | 12569.97498 | -0.668874519 | 1.415205374 | 1.24468955  |
| <b>B7L5M9</b> | TY-2482_chromosome | + | 774714 | 774947 | 286774.1586 | 230369.2795 | 237147.0193 | 255049.9364 | 240011.9157 | 302610.5747 | -0.043175707 | 0.078958546 | 0.062377361 |
| <b>B7L5N0</b> | TY-2482_chromosome | - | 775017 | 776018 | 1922.862295 | 1841.649487 | 2027.00506  | 1088.915453 | 1141.220962 | 1027.19108  | 0.850685465  | 14.59954616 | 14.01521493 |
| <b>B7L5N1</b> | TY-2482_chromosome | - | 776170 | 776583 | 220.8445258 | 368.2793111 | 260.4082593 | 119.9490628 | 122.9135057 | 100.5884683 | 1.166361801  | 11.26100257 | 10.72960255 |
| <b>B7L5N2</b> | TY-2482_chromosome | - | 776599 | 777816 | 799.8443799 | 811.6170202 | 830.3637994 | 335.0045549 | 356.0583671 | 275.3264916 | 1.332550449  | 29.41481803 | 28.65161372 |
| <b>B7L5N3</b> | TY-2482_chromosome | - | 777816 | 779084 | 1121.553147 | 1085.457677 | 1163.606937 | 372.0052529 | 385.5410432 | 274.0749944 | 1.714081303  | 47.08581332 | 46.16857568 |
| <b>B7L5N4</b> | TY-2482_chromosome | - | 779062 | 779805 | 725.6433234 | 857.9687689 | 830.2978716 | 216.813174  | 242.6275203 | 172.4897885 | 1.899551865  | 48.42967146 | 47.50298436 |
| <b>B7L5N5</b> | TY-2482_chromosome | - | 779818 | 781302 | 1512.21145  | 1698.655203 | 1731.03128  | 330.4893336 | 335.0041456 | 252.6041054 | 2.409624318  | 92.96528484 | 91.75837195 |
| <b>B7L5N6</b> | TY-2482_chromosome | - | 781314 | 781679 | 509.7040035 | 619.7921937 | 634.6629467 | 83.53786062 | 87.25398324 | 71.66230305 | 2.839992603  | 84.05095646 | 82.88031179 |
| <b>rydB</b>   | TY-2482_chromosome | - | 782006 | 782073 | 12.7538485  | 19.09600069 | 5.057718976 | 21.01105421 | 12.88787513 | 30.93652413 | -0.991114042 | 1.136462237 | 0.988782868 |
| <b>B7L5N8</b> | TY-2482_chromosome | - | 782519 | 782926 | 510.5004474 | 496.7652511 | 542.8715342 | 624.0790884 | 596.8110786 | 637.7693901 | -0.241484429 | 1.633826131 | 1.44422348  |
| <b>B7L5N9</b> | TY-2482_chromosome | - | 782926 | 785979 | 2336.119432 | 2603.403578 | 2532.902669 | 3245.6974   | 3055.138568 | 2853.918708 | -0.315110857 | 1.107483167 | 0.96212004  |
| <b>B7L5P0</b> | TY-2482_chromosome | + | 786368 | 787477 | 1037.305522 | 1104.708505 | 1099.044612 | 1150.417945 | 1128.641528 | 1137.091533 | -0.084465411 | 0.36030414  | 0.298116078 |

|               |                    |   |        |        |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L5P2</b> | TY-2482_chromosome | + | 788365 | 789576 | 18.94693916 | 16.37948633 | 11.95142355 | 25.63572099 | 29.67193729 | 26.55563918 | -0.823129669 | 1.548451626 | 1.366712424 |
| <b>B7L5P4</b> | TY-2482_chromosome | + | 791083 | 791946 | 75.32955375 | 91.33270262 | 84.72324408 | 55.73179912 | 64.88021318 | 63.17764564 | 0.418892157  | 1.435081225 | 1.26288734  |
| <b>B7L5P5</b> | TY-2482_chromosome | + | 791980 | 792735 | 378.4006543 | 371.1345207 | 332.2910407 | 457.6081486 | 443.6734649 | 476.6856451 | -0.365767306 | 2.325477931 | 2.090648386 |
| <b>B7L5P6</b> | TY-2482_chromosome | + | 792882 | 794474 | 15.98417145 | 15.70847803 | 11.82400669 | 12.75748686 | 31.62698749 | 24.60935508 | -0.692927181 | 1.043913985 | 0.90386783  |
| <b>B7L5P7</b> | TY-2482_chromosome | + | 794491 | 795639 | 35.74281835 | 37.64612064 | 33.24262016 | 43.5042048  | 54.1549527  | 55.11418233 | -0.543251851 | 1.270076139 | 1.112381279 |
| <b>B7L5P8</b> | TY-2482_chromosome | - | 795688 | 796596 | 63.77141606 | 74.89563376 | 67.58849687 | 88.53429656 | 78.10237666 | 81.8398301  | -0.307269708 | 0.715133186 | 0.60803456  |
| <b>D3GUI8</b> | TY-2482_chromosome | + | 796813 | 797673 | 34.6453071  | 28.66467634 | 49.43935589 | 49.27284582 | 42.27145278 | 49.44926725 | -0.224457129 | 0.564748494 | 0.474143354 |
| <b>B7L6H1</b> | TY-2482_chromosome | + | 797696 | 798631 | 55.51331006 | 21.76178965 | 43.10765656 | 43.25826662 | 63.09653772 | 40.63694834 | -0.12915222  | 0.456309267 | 0.380663116 |
| <b>B7L6H2</b> | TY-2482_chromosome | + | 798690 | 799976 | 62.96863525 | 56.57199104 | 53.45224203 | 45.63816435 | 47.79664026 | 38.05877215 | 0.388431731  | 0.963092343 | 0.830193269 |
| <b>B7L6H4</b> | TY-2482_chromosome | + | 800272 | 801969 | 110.9704784 | 154.6876695 | 98.44080778 | 98.55484323 | 108.8577597 | 106.8715672 | 0.0088950386 | 0.437557033 | 0.364880686 |
| <b>B7L6H5</b> | TY-2482_chromosome | - | 802032 | 804407 | 22105.60557 | 19091.59956 | 19430.57569 | 1030.197295 | 1150.022891 | 928.3615121 | 4.301349012  | 28.84752226 | 28.09075911 |
| <b>B7L6H6</b> | TY-2482_chromosome | + | 804740 | 805570 | 1861.6245   | 2049.429748 | 2137.576962 | 164.3112409 | 142.4338693 | 133.8931054 | 3.769428843  | 219.9232966 | 218.2162481 |
| <b>B7L6H7</b> | TY-2482_chromosome | + | 805730 | 806773 | 763.876709  | 776.6646676 | 725.7784561 | 525.6762609 | 587.5729961 | 508.775325  | 0.46568523   | 4.895852817 | 4.538022355 |
| <b>B5YPZ3</b> | TY-2482_chromosome | + | 806881 | 807096 | 487.3137779 | 446.7438635 | 459.8449672 | 225.3074092 | 231.6419551 | 188.9267286 | 1.11790616   | 16.88267414 | 16.2664665  |
| <b>B7L6H9</b> | TY-2482_chromosome | - | 807106 | 808539 | 3559.320737 | 3329.954938 | 3469.715538 | 1486.295429 | 1500.089866 | 1492.052626 | 1.225038495  | 12.72476798 | 12.17231112 |
| <b>B7L6I0</b> | TY-2482_chromosome | - | 808605 | 809315 | 438.2886905 | 567.3885129 | 541.4198878 | 990.5038406 | 1011.546624 | 1070.633665 | -1.025286263 | 17.07520641 | 16.45719747 |
| <b>B7L6I1</b> | TY-2482_chromosome | - | 809565 | 810026 | 1078.781459 | 963.8397479 | 987.1868583 | 645.8300566 | 623.9708706 | 708.9578176 | 0.635217791  | 8.319002545 | 7.854750001 |
| <b>B7L6I2</b> | TY-2482_chromosome | - | 810107 | 810853 | 1454.930735 | 1510.903372 | 1521.444562 | 936.6830407 | 1022.131892 | 926.4753343 | 0.633126307  | 9.97460377  | 9.468896647 |
| <b>B7L6I3</b> | TY-2482_chromosome | - | 810856 | 811404 | 1629.114444 | 1696.151052 | 1898.923028 | 854.829159  | 889.9840438 | 909.3874585 | 0.996541415  | 21.09989608 | 20.43504526 |
| <b>B7L6I4</b> | TY-2482_chromosome | - | 811470 | 812447 | 1147.296015 | 1079.546601 | 1102.044605 | 833.6671346 | 862.6538858 | 897.4821323 | 0.372995319  | 3.431426434 | 3.139010257 |
| <b>D3QUK6</b> | TY-2482_chromosome | - | 812640 | 813032 | 466.5649122 | 786.030577  | 610.7019313 | 0           | 0           | 0           | 13.25974206  | 156.2190598 | 154.7276111 |
| <b>B2U362</b> | TY-2482_chromosome | - | 813046 | 814167 | 668.9474297 | 922.7547417 | 710.1346247 | 0           | 0           | 0           | 13.58736593  | 208.0690027 | 206.396034  |
| <b>C8TSI7</b> | TY-2482_chromosome | - | 814070 | 814378 | 344.9094166 | 419.9357536 | 320.9417238 | 0           | 0           | 0           | 12.52005999  | 129.0365266 | 127.6521193 |
| <b>B3Y106</b> | TY-2482_chromosome | + | 816915 | 817529 | 865.622121  | 697.3477403 | 415.5216886 | 0           | 0           | 0           | 13.40869027  | 133.2251885 | 131.8235791 |
| <b>B7L7X2</b> | TY-2482_chromosome | + | 818005 | 820752 | 32.71119257 | 43.46469722 | 29.17232342 | 26.53372454 | 18.11087159 | 23.55431699 | 0.526052826  | 1.296797996 | 1.136594206 |
| <b>B7L7X3</b> | TY-2482_chromosome | + | 820832 | 821788 | 3691.312219 | 2409.106995 | 831.7809234 | 880.8822581 | 1207.055571 | 1189.69508  | 1.020205229  | 4.064486861 | 3.742789241 |
| <b>B7L7X4</b> | TY-2482_chromosome | + | 821796 | 822107 | 418.4968496 | 267.0341622 | 115.8457961 | 109.7959181 | 149.3384624 | 112.2409414 | 1.066084727  | 4.18185406  | 3.857226955 |
| <b>B7L7X5</b> | TY-2482_chromosome | + | 822130 | 822558 | 44.42045476 | 50.11436679 | 54.29914509 | 55.88519727 | 48.24921773 | 39.2222856  | 0.043400217  | 0.067542417 | 0.053125046 |
| <b>B7L7X6</b> | TY-2482_chromosome | + | 822542 | 822823 | 35.87197743 | 38.16236159 | 35.9887039  | 39.00309294 | 35.52411321 | 34.2541785  | -0.007335537 | 0           | 0           |
| <b>B7L7X8</b> | TY-2482_chromosome | - | 823341 | 824384 | 52.93667625 | 45.21378736 | 39.28077842 | 54.85935764 | 56.60477114 | 58.09334177 | -0.309035789 | 0.658495256 | 0.556817775 |
| <b>B7L7X9</b> | TY-2482_chromosome | - | 824387 | 826135 | 106.9836344 | 112.7452646 | 86.81024907 | 40.46947842 | 43.78473383 | 41.82655502 | 1.227594408  | 8.568514651 | 8.098383682 |
| <b>B7L7Y0</b> | TY-2482_chromosome | + | 826257 | 827123 | 121.1208843 | 139.3057141 | 157.4921833 | 23.94932175 | 20.75594582 | 13.29756489 | 2.838516777  | 36.20520548 | 35.36726891 |
| <b>B7L7Y2</b> | TY-2482_chromosome | + | 827150 | 828199 | 164.0542072 | 139.0707982 | 173.5011872 | 18.18513759 | 18.28140873 | 13.71401513 | 3.286601516  | 50.19743708 | 49.26109034 |
| <b>B7L7Y8</b> | TY-2482_chromosome | + | 830412 | 830960 | 53.38938192 | 35.69385428 | 57.03782344 | 14.43561364 | 20.01039806 | 20.07285997 | 1.525758155  | 6.323702547 | 5.91568524  |
| <b>B7L7Y9</b> | TY-2482_chromosome | + | 831102 | 832979 | 250.0929983 | 211.3335659 | 256.8924046 | 134.0282321 | 138.6554828 | 156.5629881 | 0.798671782  | 5.942106893 | 5.446812253 |
| <b>C8UBF1</b> | TY-2482_chromosome | + | 833457 | 834098 | 39.22373993 | 29.22962382 | 49.60883113 | 57.03225095 | 49.02109005 | 41.62322885 | -0.230247019 | 0.60022656  | 0.506394049 |
| <b>C8TTH7</b> | TY-2482_chromosome | + | 834098 | 834676 | 34.88676356 | 43.63148508 | 47.02605904 | 41.3821406  | 45.69371887 | 28.85890154 | 0.094161369  | 0.141238076 | 0.114131116 |
| <b>B7L7Z3</b> | TY-2482_chromosome | + | 834676 | 835023 | 32.48383207 | 22.85729337 | 36.92894447 | 30.82848774 | 32.66860816 | 25.68579783 | 0.136745124  | 0.044454745 | 0.03505707  |
| <b>C8TTH9</b> | TY-2482_chromosome | + | 835030 | 835923 | 47.91479853 | 66.84758601 | 57.43682949 | 39.53635649 | 35.02305798 | 24.77482985 | 0.717310321  | 2.594728655 | 2.343301788 |
| <b>C8TTI1</b> | TY-2482_chromosome | + | 836452 | 838581 | 198.3910116 | 200.3025816 | 201.1480895 | 22.00638439 | 24.87992707 | 24.45023316 | 3.067122099  | 56.79344489 | 55.8145016  |
| <b>C8UR26</b> | TY-2482_chromosome | + | 838584 | 839159 | 89.79651023 | 78.77598352 | 114.1598579 | 39.41742517 | 55.78514015 | 47.35908319 | 1.063898654  | 5.426750549 | 5.046748053 |
| <b>E7HLF3</b> | TY-2482_chromosome | + | 839209 | 839811 | 89.86110322 | 83.18578759 | 114.2203839 | 287.8502532 | 389.7820147 | 420.2912211 | -1.861010691 | 25.09832513 | 24.37959893 |
| <b>B7L7Z9</b> | TY-2482_chromosome | - | 839938 | 840429 | 30.23758887 | 23.88594851 | 21.92926309 | 61.448322   | 57.5099982  | 51.05397102 | -1.15790908  | 4.374509933 | 4.046806989 |
| <b>B7L800</b> | TY-2482_chromosome | - | 840439 | 843252 | 104.444017  | 119.7481313 | 112.0760093 | 167.4313903 | 189.0191448 | 189.4107077 | -0.722936598 | 4.326844967 | 3.996671242 |
| <b>B7L804</b> | TY-2482_chromosome | - | 844329 | 845510 | 112.242039  | 111.910395  | 114.9039986 | 14.12934609 | 21.79812138 | 15.82708759 | 2.709402376  | 31.53206154 | 30.74387751 |
| <b>B7L805</b> | TY-2482_chromosome | + | 845536 | 846774 | 45.55904228 | 45.13526905 | 45.97894026 | 56.30495226 | 71.40574388 | 66.86182282 | -0.504651952 | 1.463195196 | 1.288927065 |
| <b>POCE57</b> | TY-2482_chromosome | + | 848293 | 849273 | 558.7535512 | 568.7234441 | 460.4122582 | 2.644173079 | 0           | 0           | 0.283357646  | 179.7035643 | 178.1258637 |
| <b>C8U9X6</b> | TY-2482_chromosome | + | 849470 | 849727 | 21.83624813 | 21.13244568 | 35.10375383 | 262.3451544 | 273.2331091 | 324.8792221 | -3.37285346  | 50.72538886 | 49.78146262 |
| <b>Q1RE18</b> | TY-2482_chromosome | - | 849730 | 849989 | 10202.44346 | 7893.017141 | 7504.692741 | 2998.312424 | 2756.301391 | 3151.213672 | 1.547654257  | 5.98595571  | 5.58979551  |
| <b>B7L6I5</b> | TY-2482_chromosome | - | 850366 | 850662 | 9934.049518 | 9396.819653 | 10124.51154 | 8332.430227 | 7976.853656 | 8715.294429 | 0.257470609  | 0.330608341 | 0.273510311 |
| <b>B7L6I6</b> | TY-2482_chromosome | - | 850670 | 853054 | 27960.82527 | 27849.87164 | 28414.18683 | 19922.31614 | 18082.26125 | 18983.65368 | 0.523244796  | 0.849458734 | 0.727870963 |
| <b>B7L6I7</b> | TY-2482_chromosome | - | 853072 | 854052 | 5503.537226 | 5429.27257  | 5756.832895 | 7407.472067 | 7186.334866 | 6522.655181 | -0.331132705 | 0.573852373 | 0.482505238 |
| <b>B7L6I9</b> | TY-2482_chromosome | - | 854505 | 854858 | 56610.26394 | 49164.29243 | 55127.22901 | 29836.91366 | 30877.29699 | 32775.87385 | 0.823376925  | 1.470287626 | 1.295369256 |
| <b>A1ABQ1</b> | TY-2482_chromosome | + | 854980 | 855588 | 95735.82711 | 89095.09868 | 99881.24498 | 62379.91365 | 59945.1653  | 64186.75526 | 0.641110593  | 0.984961669 | 0.849930794 |
| <b>B7L6J2</b> | TY-2482_chromosome | - | 855754 | 857679 | 49524.87924 | 54964.82845 | 59339.40955 | 59399.21758 | 59001.30299 | 58270.55643 | -0.105524966 | 0.113909486 | 0.090771413 |



|               |                    |   |        |        |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>Q8XE25</b> | TY-2482_chromosome | + | 858203 | 860098 | 9.956633877 | 11.1760846  | 11.43377885 | 21.40494376 | 28.94972614 | 56.90319121 | -1.699546947 | 4.552948893 | 4.210830871 |
| <b>B7L6J5</b> | TY-2482_chromosome | - | 860440 | 861195 | 254.6335338 | 215.0892895 | 229.9935201 | 437.430947  | 557.2791774 | 560.7532177 | -1.115655582 | 15.18262085 | 14.58712289 |
| <b>B7L6J6</b> | TY-2482_chromosome | + | 861482 | 862408 | 2315.832728 | 2070.463533 | 2262.780336 | 1874.100417 | 1901.223828 | 1911.518363 | 0.254980811  | 1.428193065 | 1.256516197 |
| <b>Q1RB71</b> | TY-2482_chromosome | + | 862443 | 862817 | 414.9493503 | 479.573177  | 436.8664662 | 290.360411  | 241.9880868 | 255.3024343 | 0.718343351  | 8.018787193 | 7.562556858 |
| <b>B7L6J8</b> | TY-2482_chromosome | - | 862908 | 863765 | 1773.206906 | 1599.294125 | 1877.467862 | 2771.558913 | 2475.650401 | 2666.101283 | -0.551771107 | 6.608455245 | 6.194836949 |
| <b>B7L6J9</b> | TY-2482_chromosome | - | 863812 | 864345 | 1325.270331 | 1594.4897   | 1398.115067 | 1256.241998 | 1186.79207  | 1245.372813 | 0.179160707  | 1.471966704 | 1.296657722 |
| <b>B7L6K0</b> | TY-2482_chromosome | + | 864492 | 865157 | 670.649522  | 606.5452914 | 565.0651706 | 885.385069  | 820.9843537 | 810.0138799 | -0.453977574 | 4.34194699  | 4.01009537  |
| <b>D3GVE1</b> | TY-2482_chromosome | + | 865311 | 865910 | 301.9006978 | 274.0436002 | 271.7632286 | 342.7830757 | 327.0109008 | 348.163036  | -0.254451824 | 1.310140584 | 1.148298183 |
| <b>B7L6K2</b> | TY-2482_chromosome | + | 866046 | 867434 | 13571.22441 | 11909.43134 | 13049.77359 | 638.2206154 | 588.3422502 | 628.0163545 | 4.407961689  | 33.99181913 | 33.17264044 |
| <b>D8E437</b> | TY-2482_chromosome | - | 867444 | 867668 | 479.8088175 | 570.9373998 | 454.4850318 | 9.81900883  | 8.711594506 | 6.013517277 | 168.7549533  | 167.2089671 | 1.296657722 |
| <b>POCE57</b> | TY-2482_chromosome | + | 867700 | 868680 | 583.4969194 | 578.2371976 | 576.191282  | 0           | 0.841662005 | 1.64489609  | 9.562043074  | 209.9123784 | 208.222704  |
| <b>B7L6K5</b> | TY-2482_chromosome | - | 869735 | 869995 | 86.43841551 | 93.57295926 | 91.91493885 | 166.3903945 | 203.9738123 | 195.8375197 | -1.066156229 | 8.2543547   | 7.791860993 |
| <b>B7L6K6</b> | TY-2482_chromosome | + | 870178 | 872436 | 1192.760286 | 1166.1477   | 1083.610773 | 313.0212214 | 312.7815272 | 281.7595856 | 1.908063731  | 69.31150285 | 68.2323216  |
| <b>B7L6K7</b> | TY-2482_chromosome | - | 872489 | 873244 | 264.9055516 | 233.098752  | 284.1019672 | 313.8867985 | 288.3827347 | 299.1769976 | 1.958094189  | 0.770377019 | 0.656659803 |
| <b>B7L6K8</b> | TY-2482_chromosome | - | 873260 | 874609 | 167.7449414 | 195.4525453 | 166.9164705 | 192.1026597 | 159.3760981 | 205.9245252 | -0.116467994 | 0.205433925 | 0.167075548 |
| <b>B7L6K9</b> | TY-2482_chromosome | - | 874717 | 875556 | 190.4276508 | 186.0844874 | 212.3050901 | 189.1615291 | 188.4010597 | 183.5385871 | 0.094023332  | 0.201851789 | 0.163968311 |
| <b>B7L6L0</b> | TY-2482_chromosome | - | 875567 | 875914 | 116.8319549 | 103.3908162 | 114.8765605 | 139.4448829 | 151.3539363 | 169.0486945 | -0.421173519 | 1.958082822 | 1.746522021 |
| <b>B7L6L1</b> | TY-2482_chromosome | - | 875968 | 877323 | 125.9630883 | 166.1205731 | 143.7124529 | 233.5646672 | 238.1785131 | 209.9045906 | 0.207884722  | 4.162494073 | 3.839151051 |
| <b>B7L6L2</b> | TY-2482_chromosome | - | 877411 | 877728 | 198.0659312 | 283.1716124 | 273.9984933 | 419.3076156 | 515.3511546 | 496.9656725 | -0.962463535 | 9.323491736 | 8.833927179 |
| <b>Q1RB56</b> | TY-2482_chromosome | - | 877752 | 878009 | 261.8940387 | 314.4678459 | 234.8031483 | 148.3764783 | 193.8431983 | 168.8647884 | 0.590631504  | 4.218189363 | 3.891536714 |
| <b>B7L6L3</b> | TY-2482_chromosome | - | 878030 | 878365 | 7280.628201 | 9048.526379 | 7728.394562 | 3188.827772 | 3398.253704 | 3182.897864 | 1.241617667  | 4.704826739 | 4.35582969  |
| <b>B7L6L4</b> | TY-2482_chromosome | + | 878567 | 879391 | 1919.020843 | 2032.377774 | 2004.225201 | 755.4176784 | 748.9630976 | 609.597539  | 1.477605576  | 44.77385954 | 43.87151051 |
| <b>D8AB29</b> | TY-2482_chromosome | - | 879481 | 879702 | 204.6243613 | 245.117028  | 151.9147201 | 246.9043062 | 267.3073655 | 279.7513526 | -0.506919757 | 1.931406498 | 1.72224629  |
| <b>B7L6L5</b> | TY-2482_chromosome | + | 879624 | 880508 | 791.9623762 | 901.7513183 | 814.7840867 | 1547.871051 | 1524.379633 | 1510.39986  | -0.905256992 | 16.78639831 | 16.1730573  |
| <b>D3GVF5</b> | TY-2482_chromosome | - | 880474 | 881109 | 201.8677512 | 256.9678118 | 180.2777248 | 3036.228169 | 3265.542277 | 3237.023389 | -3.994586    | 162.4291645 | 160.9098669 |
| <b>B7L6L7</b> | TY-2482_chromosome | - | 881252 | 881734 | 380.2447453 | 362.7948367 | 374.9956783 | 165.301412  | 182.446319  | 167.8600922 | 1.126854093  | 16.45943031 | 15.8496462  |
| <b>B7L6L8</b> | TY-2482_chromosome | - | 882067 | 883032 | 168.7822998 | 143.7128204 | 167.9428559 | 86.87128896 | 91.64731555 | 52.76964617 | 1.082045149  | 7.330577355 | 6.894753868 |
| <b>B7L6L9</b> | TY-2482_chromosome | - | 883028 | 884368 | 246.1614007 | 291.8489991 | 287.1571139 | 185.2543363 | 158.8798849 | 140.5649842 | 0.736486856  | 6.046091306 | 5.648412213 |
| <b>B7L6M0</b> | TY-2482_chromosome | - | 884368 | 885843 | 255.4188417 | 266.4246212 | 267.1881376 | 161.3783103 | 177.0433904 | 102.8592735 | 0.819369541  | 5.911904155 | 5.517473353 |
| <b>B7L6M1</b> | TY-2482_chromosome | - | 885843 | 886874 | 123.1768076 | 168.673071  | 173.3175947 | 95.99742975 | 105.2974676 | 73.53358044 | 0.72306387   | 4.024622471 | 3.705290593 |
| <b>B7L6M2</b> | TY-2482_chromosome | - | 886874 | 888091 | 159.2449118 | 142.9515157 | 166.4265245 | 119.601881  | 130.0821222 | 90.03317474 | 0.491198056  | 2.077384539 | 1.857676458 |
| <b>B7L6M3</b> | TY-2482_chromosome | + | 888537 | 889340 | 1074.413519 | 1067.432818 | 1086.156384 | 1052.843955 | 1089.761368 | 903.9261225 | 0.081752947  | 0.367624885 | 0.303827579 |
| <b>D3GVG3</b> | TY-2482_chromosome | + | 889462 | 890217 | 183.5021438 | 209.2266989 | 145.9292061 | 301.0547571 | 192.8711946 | 188.1847802 | -0.437044907 | 1.163293216 | 1.013285185 |
| <b>B7L6M5</b> | TY-2482_chromosome | + | 890225 | 890899 | 310.2859323 | 310.1200466 | 284.768719  | 532.8429105 | 321.4886106 | 320.6890513 | -0.408543612 | 1.601837901 | 1.41491184  |
| <b>B7L6M6</b> | TY-2482_chromosome | + | 890916 | 891620 | 315.1290259 | 320.188175  | 280.5713645 | 427.1231597 | 311.6081142 | 280.2185814 | -0.193831271 | 0.513235212 | 0.42837958  |
| <b>B7L6M7</b> | TY-2482_chromosome | + | 891623 | 892168 | 259.882467  | 250.575067  | 244.4136525 | 368.3871096 | 311.88926   | 293.1024956 | -0.375085427 | 2.014866799 | 1.799608642 |
| <b>B7L6M8</b> | TY-2482_chromosome | + | 892181 | 893344 | 593.1342169 | 624.2385399 | 524.9057993 | 784.969485  | 690.1704622 | 607.3546622 | -0.3048576   | 1.524171    | 1.344410363 |
| <b>B7L6M9</b> | TY-2482_chromosome | + | 893365 | 894852 | 324.3637577 | 270.5096048 | 280.3954468 | 389.7310443 | 352.422738  | 315.1444065 | -0.253690974 | 1.247557449 | 1.091485655 |
| <b>B7L6N0</b> | TY-2482_chromosome | + | 894855 | 895505 | 134.9095742 | 150.7952429 | 119.7368243 | 154.4270917 | 126.7961344 | 151.2390131 | -0.148156032 | 0.250816818 | 0.205561692 |
| <b>B7L6N1</b> | TY-2482_chromosome | + | 895575 | 896879 | 1540.467369 | 1429.219277 | 1409.644429 | 2298.247971 | 1605.220322 | 1362.703886 | -0.277232402 | 1.205314206 | 1.052470458 |
| <b>C8TSS4</b> | TY-2482_chromosome | - | 896894 | 897511 | 423.8342306 | 449.7078609 | 329.8716557 | 636.0492055 | 602.9889967 | 554.2680251 | -0.644805969 | 5.081466237 | 4.716033927 |
| <b>B7L6N3</b> | TY-2482_chromosome | + | 897598 | 898002 | 175.6975066 | 191.6972381 | 171.1965441 | 980.7534772 | 917.5533556 | 889.1448249 | -2.405792461 | 71.72777544 | 70.63264523 |
| <b>C8TSS6</b> | TY-2482_chromosome | - | 897974 | 898243 | 143.3799494 | 167.8030008 | 143.9033393 | 891.3903062 | 879.7981371 | 897.7589597 | -2.508122401 | 78.58334574 | 77.44855225 |
| <b>B7L6N4</b> | TY-2482_chromosome | + | 898479 | 899819 | 1494.002971 | 1501.950445 | 1651.933947 | 3161.912617 | 3050.285728 | 2693.531978 | -0.926030019 | 12.29181939 | 11.74552721 |
| <b>B7L6N5</b> | TY-2482_chromosome | - | 89942  | 900979 | 133.8983234 | 184.1637092 | 131.2543357 | 380.2730689 | 374.185905  | 377.9364529 | -1.436250452 | 16.87851126 | 16.26302205 |
| <b>B7L6N6</b> | TY-2482_chromosome | - | 901110 | 903116 | 3487.871557 | 3384.060196 | 3367.800954 | 7534.854738 | 7146.397115 | 6541.518507 | -1.053784042 | 3.368716408 | 3.07885141  |
| <b>B7L6N7</b> | TY-2482_chromosome | - | 903124 | 904164 | 4530.19009  | 4865.34004  | 4797.205182 | 6900.03801  | 6760.247279 | 6732.99422  | -0.534641506 | 1.087708928 | 0.9445288   |
| <b>D3GVH9</b> | TY-2482_chromosome | - | 904284 | 904847 | 2491.399983 | 2324.093137 | 2367.825863 | 2757.534158 | 2582.067456 | 2595.013172 | -0.134054612 | 0.419084489 | 0.348278185 |
| <b>B7L6P1</b> | TY-2482_chromosome | + | 904993 | 906846 | 3220.154277 | 3421.465833 | 3432.269339 | 4009.76895  | 3647.760316 | 3750.146047 | -0.187614887 | 0.46111205  | 0.384460635 |
| <b>B7L6P2</b> | TY-2482_chromosome | + | 907016 | 908029 | 505.5586053 | 495.9353127 | 520.0086756 | 813.1029052 | 865.5604852 | 783.2419843 | -0.685235288 | 9.490410921 | 8.998152221 |
| <b>B7L6P3</b> | TY-2482_chromosome | + | 908043 | 908681 | 439.0674374 | 455.3719998 | 456.8435114 | 505.4233337 | 566.6787006 | 496.0507968 | -0.19074223  | 0.952971727 | 0.821252481 |
| <b>B7L6P4</b> | TY-2482_chromosome | - | 908780 | 910135 | 64.40185054 | 59.98305129 | 47.99458698 | 122.5334485 | 144.9926663 | 148.6027936 | -1.294143722 | 8.975160601 | 8.49410668  |
| <b>B7L6P5</b> | TY-2482_chromosome | - | 910255 | 911010 | 164.1018458 | 187.7759322 | 137.1774851 | 196.3699223 | 220.2720792 | 201.0032602 | -0.410537974 | 1.455334908 | 1.281456453 |
| <b>B7L6P6</b> | TY-2482_chromosome | - | 911150 | 912127 | 87.14162073 | 113.7080974 | 114.5647205 | 89.52022954 | 84.57384199 | 86.00295005 | 0.250278245  | 0.789121458 | 0.673932247 |
| <b>B7L6P7</b> | TY-2482_chromosome | - | 912140 | 913084 | 67.14584906 | 69.04699593 | 82.86198489 | 31.33450824 | 29.35489018 | 36.36056601 | 1.203438455  | 6.292401483 | 5.886382978 |

|               |                    |   |        |        |             |             |             |              |             |             |              |             |             |
|---------------|--------------------|---|--------|--------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L6P8</b> | TY-2482_chromosome | - | 913092 | 913925 | 52.82915263 | 76.38755703 | 61.84504937 | 27.30563081  | 33.88167811 | 24.27174727 | 1.075482813  | 5.098163007 | 4.731922708 |
| <b>B7L6P9</b> | TY-2482_chromosome | - | 913949 | 914923 | 37.66025144 | 25.14103016 | 50.84313422 | 24.97533754  | 29.94817063 | 30.61828183 | 0.545601576  | 0.846826049 | 0.725698458 |
| <b>B7L6Q0</b> | TY-2482_chromosome | - | 915009 | 916385 | 36.36891323 | 31.58258169 | 19.51514401 | 44.23912125  | 52.46593446 | 35.98940566 | -0.65781749  | 1.389718075 | 1.220873853 |
| <b>B7L6Q1</b> | TY-2482_chromosome | - | 916415 | 917488 | 50.28978479 | 42.70931311 | 51.5638978  | 81.25799988  | 82.1658196  | 84.31207127 | -0.733831506 | 3.220338483 | 2.93756351  |
| <b>B7L6Q2</b> | TY-2482_chromosome | - | 917861 | 918130 | 875.4492288 | 1132.977298 | 1035.804032 | 736.7561319  | 658.6243797 | 753.006312  | 0.45641864   | 4.866307785 | 4.509269832 |
| <b>B7L6Q3</b> | TY-2482_chromosome | - | 918175 | 918585 | 1600.446425 | 2040.112303 | 1996.761943 | 1572.489533  | 1428.502776 | 1734.395899 | 0.224434121  | 1.402729305 | 1.23324292  |
| <b>B7L6Q4</b> | TY-2482_chromosome | + | 918927 | 919919 | 139269.9132 | 119682.7165 | 121730.0883 | 166630.4015  | 143527.0595 | 149569.012  | -0.254811779 | 0.324705675 | 0.268202569 |
| <b>D3GVJ4</b> | TY-2482_chromosome | + | 919985 | 920887 | 2976.504374 | 3642.136684 | 2905.533979 | 2608.097417  | 2323.010483 | 2381.369051 | 0.30840426   | 1.583326251 | 1.397869432 |
| <b>B7L6Q6</b> | TY-2482_chromosome | - | 920944 | 921795 | 1337.958961 | 1281.998014 | 1533.907097 | 2054.924295  | 2082.972805 | 2040.774211 | -0.534497077 | 6.404980698 | 5.995625727 |
| <b>B7L6Q7</b> | TY-2482_chromosome | - | 921888 | 922631 | 6490.125544 | 6351.921815 | 6855.882217 | 6398.126707  | 6339.098549 | 6005.863514 | 0.086432702  | 0.088655344 | 0.070262709 |
| <b>B7L6Q8</b> | TY-2482_chromosome | + | 923067 | 924998 | 4327.06467  | 4489.780752 | 4819.95018  | 996.8800479  | 1017.783398 | 758.029291  | 2.298253154  | 36.1992767  | 35.36253653 |
| <b>B7L6Q9</b> | TY-2482_chromosome | + | 925114 | 926394 | 1035.381909 | 1007.227832 | 1057.352443 | 346.7891002  | 406.1245349 | 274.5617608 | 1.596476049  | 38.74963053 | 37.89020504 |
| <b>B7L6R0</b> | TY-2482_chromosome | + | 926544 | 928016 | 34.06717363 | 74.88598563 | 51.73217508 | 88.6299435   | 78.09085256 | 63.55848018 | -0.678786957 | 1.370683898 | 1.202993181 |
| <b>B7L6R1</b> | TY-2482_chromosome | + | 928200 | 929687 | 220.67894   | 183.2222974 | 215.3716174 | 1067.851831  | 1387.403286 | 1354.368004 | -2.567035056 | 80.40963755 | 79.2264976  |
| <b>B7L6R2</b> | TY-2482_chromosome | + | 929733 | 930233 | 863.3561646 | 847.4671693 | 969.3965598 | 1172.832498  | 1124.355191 | 1152.306856 | -0.33694256  | 3.252737879 | 2.967763066 |
| <b>D8B8Y4</b> | TY-2482_chromosome | + | 930330 | 930515 | 63.14798712 | 38.00000268 | 71.16203439 | 157.6477845  | 158.7170063 | 181.4283861 | -1.391018382 | 12.16507838 | 11.62244344 |
| <b>B7L6R5</b> | TY-2482_chromosome | - | 930921 | 931739 | 326.0583813 | 280.6656987 | 281.8727077 | 285.4072655  | 245.5018591 | 306.2429851 | 0.106451564  | 0.280003634 | 0.230771691 |
| <b>B7L6R6</b> | TY-2482_chromosome | + | 931836 | 933014 | 216.6620373 | 238.1239584 | 242.6302229 | 625.8569094  | 653.8356919 | 644.0577387 | -1.469945675 | 29.02718394 | 28.26792914 |
| <b>B7L6R7</b> | TY-2482_chromosome | + | 933072 | 933416 | 665.0867101 | 673.8604179 | 733.892133  | 793.6638982  | 698.5942104 | 746.6989456 | -0.098076858 | 0.498124001 | 0.415694307 |
| <b>B7L6R8</b> | TY-2482_chromosome | - | 933444 | 933695 | 600.4337502 | 661.3292518 | 716.5235184 | 555.491328   | 487.5601756 | 513.2153622 | 0.349088995  | 2.550678036 | 2.301264305 |
| <b>B7L6R9</b> | TY-2482_chromosome | + | 933878 | 934900 | 2598.858586 | 2523.274116 | 2555.986588 | 2750.250262  | 2638.366562 | 2633.248033 | -0.05882576  | 0.155513367 | 0.125251762 |
| <b>B7L6S0</b> | TY-2482_chromosome | - | 935173 | 935418 | 2701.828053 | 3270.688306 | 2681.331629 | 7626.1198924 | 861.7341491 | 745.0533377 | 1.827924005  | 54.66687747 | 53.70099665 |
| <b>B7L6S1</b> | TY-2482_chromosome | - | 935433 | 935615 | 1390.378127 | 1451.798642 | 859.2140346 | 907.9499462  | 1503.587438 | 1009.322476 | 0.013270583  | 0.289027649 | 0.238624838 |
| <b>B7L6S2</b> | TY-2482_chromosome | - | 935648 | 936853 | 2833.929435 | 3051.524709 | 1883.482829 | 2104.916238  | 3177.067567 | 2226.134132 | -0.050819397 | 0.091194538 | 0.071893337 |
| <b>A7ZMR8</b> | TY-2482_chromosome | + | 936876 | 937820 | 262.6953549 | 225.2584487 | 228.6850826 | 357.7707225  | 276.3625823 | 340.9371458 | -0.4255732   | 2.569337832 | 2.319150922 |
| <b>B7L6S6</b> | TY-2482_chromosome | - | 938035 | 938036 | 569.1169048 | 624.7253138 | 564.8440913 | 949.4097082  | 1103.924424 | 1076.532701 | -0.858409662 | 13.32366713 | 12.76147865 |
| <b>B7L6S7</b> | TY-2482_chromosome | - | 938800 | 939720 | 269.3129134 | 245.5356036 | 233.0904227 | 278.7482821  | 195.8475233 | 212.6932256 | 0.114522038  | 0.35872915  | 0.29694247  |
| <b>B7L6S8</b> | TY-2482_chromosome | + | 939823 | 940905 | 249.0936807 | 280.6884365 | 262.9661861 | 201.1246056  | 194.0714357 | 202.1514983 | 0.382100016  | 2.27145258  | 2.040045624 |
| <b>B7L6S9</b> | TY-2482_chromosome | + | 941324 | 942766 | 41.20420567 | 34.63330522 | 59.41329724 | 64.60836844  | 51.82767667 | 76.88886053 | -0.409620806 | 1.289598147 | 1.130525169 |
| <b>B7L6T0</b> | TY-2482_chromosome | + | 942801 | 943922 | 168.6291206 | 151.8669193 | 151.0712848 | 166.7725875  | 180.9523756 | 211.1892963 | 0.007089048  | 0.013164898 | 0.010371998 |
| <b>B7L6T1</b> | TY-2482_chromosome | + | 943981 | 944943 | 158.7717385 | 136.3720991 | 140.9826879 | 229.4613239  | 115.1740064 | 164.1520104 | -0.470946397 | 2.227706076 | 1.999253515 |
| <b>B7L6T2</b> | TY-2482_chromosome | - | 945003 | 946127 | 414.5321955 | 486.3147453 | 352.7563404 | 858.6498249  | 903.3002358 | 816.3610294 | -1.123751894 | 16.47768891 | 15.86719575 |
| <b>B7L6T3</b> | TY-2482_chromosome | - | 946200 | 947882 | 867.5458704 | 764.7931003 | 820.3970141 | 1331.01827   | 1463.289396 | 1496.496016 | -0.776467712 | 13.70424976 | 13.13534278 |
| <b>B7L6T4</b> | TY-2482_chromosome | - | 948090 | 948668 | 598.6926439 | 644.878846  | 693.6005585 | 1472.602224  | 1757.475327 | 1895.139447 | -1.389423613 | 33.3026102  | 32.48969684 |
| <b>B7L6T5</b> | TY-2482_chromosome | - | 948711 | 949403 | 597.793299  | 490.3246227 | 608.8419405 | 1749.370181  | 1924.214723 | 1819.347705 | -1.634335712 | 50.9049862  | 49.95944048 |
| <b>B7L6T6</b> | TY-2482_chromosome | - | 949464 | 951371 | 954.5800516 | 1085.783983 | 1018.678001 | 2008.59869   | 1957.579172 | 1783.039565 | -0.94188378  | 16.05837717 | 15.45176955 |
| <b>A7ZMT0</b> | TY-2482_chromosome | - | 951407 | 951790 | 1099.646266 | 1404.86553  | 1252.856    | 1134.830112  | 1139.686286 | 1107.525023 | 0.099128264  | 0.744645861 | 0.633745456 |
| <b>B7L6T8</b> | TY-2482_chromosome | + | 952210 | 952566 | 506.6100183 | 692.4001889 | 606.2813247 | 464.4984287  | 579.2822651 | 627.3366467 | 0.057683293  | 0.336049054 | 0.278355284 |
| <b>B7L6U0</b> | TY-2482_chromosome | + | 952942 | 953400 | 406.9979183 | 499.9342121 | 436.9060903 | 659.9077352  | 628.5413151 | 593.0516864 | -0.539738054 | 4.393423938 | 4.058573294 |
| <b>B7L6U1</b> | TY-2482_chromosome | + | 954307 | 954882 | 370.3959625 | 331.6752322 | 370.5467783 | 344.105094   | 340.7966032 | 318.7146913 | 0.124637301  | 0.381317713 | 0.31519662  |
| <b>B7L6U2</b> | TY-2482_chromosome | + | 955069 | 956430 | 2993.274026 | 2406.860503 | 2851.758409 | 3423.946579  | 3463.827359 | 2917.186422 | -0.200402408 | 0.716556037 | 0.609011866 |
| <b>B7L6U3</b> | TY-2482_chromosome | + | 956564 | 958159 | 241.0367236 | 154.9471888 | 211.0966767 | 180.0576881  | 172.7128486 | 175.3369335 | 0.293447693  | 0.707591874 | 0.601271852 |
| <b>B7L6U4</b> | TY-2482_chromosome | - | 958169 | 959722 | 1484.018462 | 1371.147486 | 1611.623836 | 1097.64668   | 1021.982196 | 1010.296186 | 0.494214307  | 6.431427717 | 6.021849401 |
| <b>C8UBR5</b> | TY-2482_chromosome | - | 959713 | 959919 | 181.4845964 | 221.4442314 | 245.0712589 | 155.2702538  | 153.5964312 | 180.1148768 | 0.410528313  | 1.885645014 | 1.679432042 |
| <b>D7X960</b> | TY-2482_chromosome | - | 960023 | 960214 | 4793.188166 | 4844.12622  | 4752.78723  | 5258.925061  | 4781.292538 | 4542.597858 | -0.028965359 | 0.023280183 | 0.018116722 |
| <b>B7L6U5</b> | TY-2482_chromosome | + | 960185 | 961153 | 27745.90805 | 24797.51186 | 27073.67546 | 32162.90722  | 28993.52967 | 28452.23824 | -0.145633131 | 0.197401643 | 0.159992544 |
| <b>B7L6U6</b> | TY-2482_chromosome | + | 961219 | 962016 | 20716.46062 | 18975.23506 | 20925.82546 | 26791.27866  | 23851.61224 | 23280.24707 | -0.262726374 | 0.379006851 | 0.313455972 |
| <b>B7L6U7</b> | TY-2482_chromosome | + | 962023 | 962880 | 20766.75119 | 18730.95672 | 20529.33864 | 29233.78842  | 26267.42089 | 24528.18604 | -0.392165749 | 0.614729691 | 0.518623666 |
| <b>B7L6U8</b> | TY-2482_chromosome | + | 962938 | 963393 | 671.4765744 | 704.5948612 | 685.3663552 | 1117.071141  | 1103.675653 | 1018.888552 | -0.666383906 | 9.444130282 | 8.952681581 |
| <b>B7L6U9</b> | TY-2482_chromosome | + | 963583 | 963825 | 326.4555001 | 311.7385332 | 301.92334   | 2567.183299  | 4356.660532 | 4306.904774 | -3.564821568 | 97.64905822 | 96.42354009 |
| <b>B7L6V0</b> | TY-2482_chromosome | + | 963825 | 964388 | 204.9029166 | 228.9136143 | 190.0520418 | 1802.83889   | 2428.14842  | 2718.274067 | -3.512005624 | 117.6916078 | 116.3735445 |
| <b>B7L6V1</b> | TY-2482_chromosome | - | 964391 | 965197 | 504.9071291 | 406.3590837 | 476.8959676 | 1208.587728  | 1398.657601 | 1500.96274  | -1.506967871 | 37.88012369 | 37.02694715 |
| <b>A1ABZ1</b> | TY-2482_chromosome | + | 965690 | 965936 | 7340.705548 | 8237.444682 | 8452.030314 | 4098.497778  | 4119.494469 | 5349.891662 | 0.827221317  | 2.091927182 | 1.871063293 |
| <b>Q1RAW4</b> | TY-2482_chromosome | - | 966346 | 966651 | 785.7403266 | 987.3143269 | 826.3773752 | 896.6733191  | 1149.381448 | 1152.351399 | -0.354708358 | 1.94056001  | 1.730785122 |
| <b>B7L6V6</b> | TY-2482_chromosome | + | 967062 | 967298 | 172.5563408 | 139.8414695 | 112.9575903 | 147.1156143  | 200.2106134 | 207.3862311 | -0.383187848 | 1.369003499 | 1.201824469 |

|        |                    |   |         |         |              |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| C8UBS7 | TY-2482_chromosome | - | 967447  | 968235  | 1346.482624  | 1708.627001 | 1389.661806 | 1829.328339 | 1663.634825 | 1549.111707 | -0.258051767 | 0.947351904 | 0.816221373 |
| B7L7N0 | TY-2482_chromosome | + | 968412  | 969782  | 69.21325094  | 57.59846226 | 54.97258692 | 323.3381661 | 364.346801  | 315.4364713 | -2.45470038  | 39.56789112 | 38.70467265 |
| B7L7N1 | TY-2482_chromosome | - | 969834  | 970712  | 5646.134554  | 4927.02138  | 5600.209411 | 3185.14526  | 3243.845503 | 3460.05359  | 0.751316565  | 1.990157017 | 1.776039865 |
| B7L7N2 | TY-2482_chromosome | - | 970907  | 972952  | 7072.793325  | 6268.267773 | 5977.202898 | 9266.796135 | 9304.636461 | 8350.399315 | -0.477075844 | 0.878860876 | 0.753922139 |
| B7L7N3 | TY-2482_chromosome | - | 972975  | 973670  | 8883.266051  | 7337.523291 | 7599.124991 | 8191.898635 | 8372.918179 | 8295.141322 | -0.033072825 | 0.072247032 | 0.057109586 |
| B7L7N4 | TY-2482_chromosome | - | 973770  | 974318  | 2522.553665  | 2495.124355 | 2521.480685 | 2353.090113 | 2239.568684 | 2391.819798 | 0.114323423  | 0.301397467 | 0.24883983  |
| B7L7N5 | TY-2482_chromosome | + | 974394  | 975674  | 1678.761089  | 1730.031779 | 1454.522335 | 1304.845613 | 1372.941299 | 1425.10887  | 0.211599224  | 1.57708136  | 1.392423857 |
| B7L7N6 | TY-2482_chromosome | + | 975646  | 978276  | 2924.234008  | 3174.956503 | 2912.443688 | 2754.368098 | 2898.490593 | 2688.841549 | 0.083704767  | 0.274188372 | 0.22612415  |
| B7L7N7 | TY-2482_chromosome | + | 978359  | 979795  | 444.4435195  | 424.1549483 | 311.3371767 | 946.4804205 | 1082.708989 | 965.1703274 | -1.392470942 | 24.77488049 | 24.06068295 |
| B7L7N8 | TY-2482_chromosome | + | 979916  | 980149  | 158.017455   | 188.9020448 | 155.4860703 | 115.2683911 | 119.7714844 | 110.6912012 | 0.479417448  | 2.642845105 | 2.389083734 |
| B7L7N9 | TY-2482_chromosome | + | 980173  | 980445  | 216.6649341  | 284.355312  | 203.1875952 | 121.0058679 | 117.8487532 | 115.3848047 | 0.890575645  | 7.829782701 | 7.379971842 |
| B7L7P0 | TY-2482_chromosome | + | 980452  | 981105  | 239.1579656  | 263.7145998 | 237.2594422 | 218.2872734 | 236.3729887 | 234.8796812 | 0.072556397  | 0.282382443 | 0.232760562 |
| ryeA   | TY-2482_chromosome | - | 981202  | 981450  | 1325.563735  | 1661.44905  | 1534.365814 | 1712.992691 | 1693.095976 | 2380.300352 | -0.385065308 | 2.149484394 | 1.925717457 |
| B7L7P2 | TY-2482_chromosome | - | 981504  | 981842  | 1645.087362  | 1656.883749 | 1764.110613 | 1926.855806 | 1960.062853 | 1946.984005 | -0.107802843 | 1.097426954 | 0.952914076 |
| B7L7P3 | TY-2482_chromosome | - | 981858  | 982727  | 3730.288492  | 3662.891699 | 3916.360817 | 3652.788803 | 3667.928519 | 3423.08125  | 0.086447132  | 0.156979321 | 0.126531123 |
| B7L7P4 | TY-2482_chromosome | - | 982734  | 983105  | 2424.985092  | 2367.693719 | 2407.979838 | 2114.182526 | 2245.071099 | 2179.868499 | 0.145617626  | 0.476844669 | 0.397245631 |
| B7L7P5 | TY-2482_chromosome | + | 983244  | 983471  | 314.8540598  | 313.7308208 | 253.5301221 | 576.9575842 | 663.8992496 | 714.6203217 | -1.179800362 | 17.07812317 | 16.45975306 |
| B7L7P6 | TY-2482_chromosome | + | 983576  | 984229  | 442.9177681  | 385.0024261 | 358.2358034 | 345.5148452 | 338.0224829 | 351.8053338 | 0.20007394   | 0.907566316 | 0.77983468  |
| B7L7P7 | TY-2482_chromosome | + | 984256  | 984915  | 550.9951449  | 529.7466983 | 560.2432593 | 549.1121906 | 533.1761572 | 541.3665842 | 0.029397597  | 0.059914422 | 0.047381584 |
| B7L7P8 | TY-2482_chromosome | - | 984918  | 986975  | 1099.431795  | 1280.53225  | 1248.385568 | 839.3364815 | 770.8501546 | 827.3781567 | 0.551440339  | 7.22858168  | 6.796367723 |
| B7L7P9 | TY-2482_chromosome | - | 987187  | 987843  | 694.7294583  | 751.3146356 | 850.0144973 | 549.8282674 | 530.5421107 | 564.5692395 | 0.498027255  | 4.800858984 | 4.446976681 |
| D6JAC7 | TY-2482_chromosome | + | 988050  | 988253  | 1444.675964  | 1308.84211  | 1406.524643 | 723.8631953 | 787.3939276 | 765.6267433 | 0.895169982  | 17.23494736 | 16.61404069 |
| B7L7Q0 | TY-2482_chromosome | - | 988173  | 988538  | 3528.703617  | 3407.897537 | 3699.390829 | 1849.113032 | 1788.169013 | 1855.383551 | 0.973126917  | 8.222368883 | 7.760883406 |
| B7L7Q1 | TY-2482_chromosome | - | 988596  | 988883  | 2559.772665  | 2407.719631 | 2517.142563 | 1971.702399 | 2106.192305 | 2431.562317 | 0.224041774  | 0.639995903 | 0.540621213 |
| B7L7Q2 | TY-2482_chromosome | + | 989017  | 990192  | 257.0604946  | 299.8020415 | 243.229464  | 863.0763498 | 909.2304954 | 961.5855    | -1.827077876 | 45.14702384 | 44.24184086 |
| B7L7Q3 | TY-2482_chromosome | - | 990254  | 990892  | 3214.698097  | 2985.560609 | 3094.760111 | 11003.21566 | 1036.01558  | 10913.81869 | -1.795891899 | 7.768693847 | 7.20910039  |
| B7L7Q4 | TY-2482_chromosome | - | 990932  | 992740  | 1561.789017  | 1420.334324 | 1567.339198 | 5094.418805 | 4699.895128 | 4525.649279 | -1.629421374 | 17.37379885 | 16.75070613 |
| B7L7Q5 | TY-2482_chromosome | - | 992978  | 994450  | 6482.208118  | 6860.392015 | 6914.893208 | 8177.009441 | 7982.204658 | 7734.203204 | -0.244943218 | 0.347868256 | 0.288182763 |
| B7L7Q6 | TY-2482_chromosome | + | 994788  | 995654  | 1404.187205  | 1495.633526 | 1227.540613 | 2082.889309 | 1575.215503 | 1697.998033 | -0.42770971  | 2.700309992 | 2.443730551 |
| B7L7Q7 | TY-2482_chromosome | + | 995785  | 997224  | 4630.233984  | 4251.891148 | 4278.746947 | 11993.22728 | 10664.00496 | 10951.40035 | -1.344367152 | 4.562890778 | 4.219876106 |
| B7L7Q8 | TY-2482_chromosome | - | 997361  | 998329  | 1357.024028  | 1295.866218 | 1316.10869  | 1608.04173  | 1784.46841  | 1712.620235 | -0.35350763  | 3.07324076  | 2.798175911 |
| B7L7Q9 | TY-2482_chromosome | - | 998452  | 999771  | 1339.286176  | 1285.450381 | 1366.229755 | 4186.305596 | 4235.31171  | 3862.66789  | -1.608983308 | 20.88313497 | 20.22029013 |
| B7L7R0 | TY-2482_chromosome | - | 999790  | 1000719 | 1487.308493  | 1516.474698 | 1501.419738 | 3508.297607 | 3516.814842 | 3355.032095 | -1.210006553 | 12.44469257 | 11.89778784 |
| B7L7R1 | TY-2482_chromosome | + | 1000798 | 1001550 | 1278.690162  | 1051.012773 | 1255.486196 | 2213.519884 | 2048.544862 | 2227.939598 | -0.802369735 | 13.08983465 | 12.53080929 |
| B7L7R2 | TY-2482_chromosome | + | 1001550 | 1002332 | 820.4619089  | 731.24238   | 783.0282557 | 1878.523752 | 1951.793027 | 2186.43712  | -1.335080885 | 34.974388   | 34.71593163 |
| B7L7R3 | TY-2482_chromosome | - | 1002485 | 1003492 | 2075.733677  | 2154.746118 | 2101.993305 | 2003.644782 | 1940.597593 | 1919.637727 | 0.10035923   | 0.509287877 | 0.425594167 |
| B7L7R4 | TY-2482_chromosome | - | 1003504 | 1004112 | 1421.109751  | 1614.021473 | 1553.059114 | 1427.398694 | 1396.806898 | 1381.933358 | 0.102149647  | 0.632733471 | 0.534123673 |
| B3Y0L8 | TY-2482_chromosome | + | 1004288 | 1004986 | 160.1615587  | 148.6091937 | 119.9556817 | 196.4682453 | 234.1948374 | 219.166415  | -0.625523808 | 3.475239719 | 3.180085664 |
| B7L7R6 | TY-2482_chromosome | - | 1004994 | 1005512 | 2916.134674  | 3169.560345 | 2935.397521 | 1644.679581 | 1704.174868 | 1627.749714 | 0.832714072  | 8.471066599 | 8.003751578 |
| B7L7R7 | TY-2482_chromosome | - | 1005550 | 1006287 | 5370.517595  | 5600.462038 | 5914.788398 | 2945.147668 | 2686.859456 | 2764.014853 | 1.012182105  | 4.619468463 | 4.273955078 |
| B7L7R8 | TY-2482_chromosome | - | 1006319 | 1006759 | 2043.393364  | 2025.060075 | 2309.848659 | 1313.130595 | 1307.793901 | 1118.506072 | 0.790892012  | 11.25482222 | 10.72386498 |
| B7L7R9 | TY-2482_chromosome | - | 1006764 | 1008533 | 7358.200654  | 7445.621714 | 7975.062141 | 7335.255182 | 7035.200916 | 6520.874721 | 0.13273058   | 0.160305554 | 0.128829661 |
| B7L7S0 | TY-2482_chromosome | + | 1008843 | 1009540 | 2462.0277083 | 247.9064023 | 217.3307248 | 327.6457101 | 331.1868111 | 310.4775021 | -0.484032293 | 3.065736086 | 2.791198759 |
| C6V226 | TY-2482_chromosome | + | 1009764 | 1010009 | 105.8021376  | 122.7568535 | 98.09965818 | 0           | 0           | 0           | 10.80602261  | 51.33142343 | 50.38133688 |
| B7LEU8 | TY-2482_chromosome | - | 1010554 | 1011246 | 89.06385503  | 132.6736539 | 123.2334018 | 47.13863972 | 36.30501298 | 55.17028347 | 1.264346734  | 8.439432881 | 7.972627894 |
| B7LEU7 | TY-2482_chromosome | - | 1011171 | 1012706 | 114.8682661  | 173.2762343 | 135.2052781 | 56.8327037  | 54.95870343 | 51.73950971 | 1.272080703  | 10.33805839 | 9.825609168 |
| D3H3F5 | TY-2482_chromosome | - | 1012861 | 1013457 | 69.1444122   | 87.01219871 | 90.13316497 | 17.11031288 | 25.50209278 | 44.47429068 | 1.509280363  | 8.097031674 | 7.639306345 |
| B7L8N6 | TY-2482_chromosome | - | 1013528 | 1016920 | 229.5690275  | 272.3842726 | 228.7334062 | 670.1628482 | 671.1896873 | 714.2760455 | -1.543269283 | 29.8808514  | 29.11148451 |
| Q1RCC4 | TY-2482_chromosome | + | 1018292 | 1019095 | 54.01063588  | 67.40361243 | 54.81122504 | 33.38544634 | 32.48798488 | 36.11481633 | 0.727833697  | 2.725023208 | 2.467185397 |
| B7LBD1 | TY-2482_chromosome | - | 1018999 | 1019325 | 15.73470479  | 12.16677322 | 10.39342628 | 27.31426647 | 28.97791304 | 29.03395198 | -1.156089719 | 2.654865401 | 2.400166704 |
| C8UEI9 | TY-2482_chromosome | - | 1019325 | 1021934 | 325.7037909  | 385.3060164 | 360.5946618 | 44.54769437 | 42.85569103 | 38.25398657 | 3.052447643  | 75.27095545 | 74.15132008 |
| A1AAL5 | TY-2482_chromosome | + | 1022113 | 1023447 | 265.2483729  | 282.6353702 | 281.541669  | 48.73139468 | 52.47161197 | 54.02260688 | 2.40979311   | 47.74721897 | 46.82491872 |
| B7L471 | TY-2482_chromosome | - | 1024882 | 1025310 | 61.9264097   | 73.14686453 | 57.817512   | 26.0675837  | 32.05060689 | 33.47895878 | 1.017357874  | 4.712328014 | 4.362747628 |
| B7L470 | TY-2482_chromosome | - | 1025317 | 1026342 | 210.2343045  | 218.8583365 | 253.7999706 | 50.37627274 | 50.49423185 | 57.9467273  | 2.129579138  | 32.93787227 | 32.12777719 |
| B7L468 | TY-2482_chromosome | - | 1026787 | 1028289 | 125.6336188  | 129.7730661 | 149.0009321 | 8.982938752 | 19.94503838 | 20.48917229 | 3.065718283  | 39.63481721 | 38.77032701 |

|               |                    |   |         |         |             |             |             |              |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|-------------|
| <b>C8TUI5</b> | TY-2482_chromosome | - | 1028282 | 1029871 | 326.274782  | 291.422505  | 297.5638217 | 42.04440492  | 41.63515023 | 37.39285932 | 2.927200906  | 66.24887243 | 65.1860816  |
| <b>B7L465</b> | TY-2482_chromosome | - | 1030061 | 1032028 | 155.4649626 | 206.412965  | 196.5790818 | 4.969850482  | 7.599431116 | 9.166287558 | 4.636614898  | 80.53441486 | 79.38759028 |
| <b>A1AAK5</b> | TY-2482_chromosome | - | 1031961 | 1032746 | 72.50920221 | 92.74768917 | 98.65231725 | 0            | 0           | 0           | 10.54314936  | 42.49123718 | 41.6092039  |
| <b>B7LES4</b> | TY-2482_chromosome | - | 1034668 | 1035198 | 49.5075075  | 63.81322757 | 61.57165146 | 71.31241822  | 78.46338597 | 102.8860471 | -0.551320615 | 1.691954492 | 1.498150777 |
| <b>B7LES3</b> | TY-2482_chromosome | + | 1035327 | 1035638 | 211.0435423 | 186.9205327 | 205.4062625 | 167.9689279  | 187.855268  | 179.0682174 | 0.203798965  | 0.618337837 | 0.521471321 |
| <b>B7LES2</b> | TY-2482_chromosome | - | 1035654 | 1036457 | 147.7370492 | 144.3857531 | 136.7095339 | 72.04632298  | 71.99792346 | 77.06894057 | 0.948390637  | 7.050979468 | 6.625010736 |
| <b>B7MPX6</b> | TY-2482_chromosome | - | 1036831 | 1038711 | 357.9307845 | 343.2113192 | 418.9701033 | 112.6496786  | 107.2512084 | 108.5578549 | 1.809041496  | 32.7885075  | 31.98009465 |
| <b>B7MV04</b> | TY-2482_chromosome | - | 1038847 | 1039137 | 6939.754657 | 7198.575642 | 2205.175286 | 126.7701405  | 159.1323507 | 125.634255  | 5.115165379  | 57.1241031  | 56.13847823 |
| <b>C6USM2</b> | TY-2482_chromosome | - | 1039467 | 1040522 | 132.528777  | 185.6562904 | 146.7617522 | 39.10088074  | 49.30164773 | 64.77264788 | 1.530703308  | 13.51823083 | 12.95221594 |
| <b>B7NVG6</b> | TY-2482_chromosome | - | 1040677 | 1040910 | 162.1461661 | 141.9250812 | 149.5198602 | 0            | 0           | 0           | 11.35956728  | 71.08617092 | 69.99427771 |
| <b>B3HVA3</b> | TY-2482_chromosome | + | 1041142 | 1042065 | 237.5816769 | 277.747575  | 227.3919454 | 0            | 0           | 0           | 11.99184383  | 101.2695297 | 100.0381227 |
| <b>B3IDN1</b> | TY-2482_chromosome | + | 1042055 | 1042600 | 308.7666142 | 305.7314459 | 298.9604578 | 0            | 0           | 0           | 12.34345922  | 125.4655069 | 124.101686  |
| <b>B3WIT4</b> | TY-2482_chromosome | - | 1047848 | 1049038 | 1315.623229 | 1052.222819 | 585.2264224 | 0            | 0           | 0           | 13.97831036  | 149.4869768 | 148.0216983 |
| <b>C8UKW2</b> | TY-2482_chromosome | + | 1049943 | 1050632 | 1665.883098 | 1671.340966 | 1566.283839 | 0            | 0           | 0           | 14.75827115  | 325.0237216 | 323.0330172 |
| <b>Q1R2C0</b> | TY-2482_chromosome | - | 1050735 | 1051064 | 1284.329029 | 1269.118245 | 712.8447913 | 0            | 0           | 0           | 14.08595135  | 186.1797745 | 184.5818705 |
| <b>P76513</b> | TY-2482_chromosome | + | 1051766 | 1052587 | 188.4926556 | 206.5608513 | 165.7406605 | 0.126569384  | 1.329467329 | 1.496676117 | 7.425297605  | 81.81015067 | 80.65594414 |
| <b>B3WUG8</b> | TY-2482_chromosome | + | 1055098 | 1055853 | 106.3056646 | 125.7557884 | 124.7989535 | 0            | 0           | 0           | 10.97174402  | 56.86111635 | 55.88134346 |
| <b>B7MPT9</b> | TY-2482_chromosome | + | 1056622 | 1057941 | 1412.192848 | 1468.338361 | 1204.590667 | 0            | 0           | 0           | 14.46532197  | 325.0237216 | 323.0330172 |
| <b>E1RYP9</b> | TY-2482_chromosome | + | 1057926 | 1059141 | 997.7197875 | 950.8202012 | 929.7571373 | 1072.691395  | 1097.567609 | 1163.180876 | -0.207763578 | 1.409513058 | 1.239512259 |
| <b>B7L7S3</b> | TY-2482_chromosome | + | 1059185 | 1059925 | 477.954355  | 473.4260241 | 492.7190548 | 983.2947877  | 1063.106794 | 1015.990124 | -1.075446452 | 22.90179326 | 22.21126646 |
| <b>B7L7S4</b> | TY-2482_chromosome | + | 1059925 | 1060893 | 682.9393671 | 413.5666875 | 616.0312437 | 908.5034276  | 960.7998202 | 868.3945348 | -0.563697551 | 5.824118385 | 5.431195178 |
| <b>B7L7S5</b> | TY-2482_chromosome | - | 1061065 | 1063491 | 492.8868717 | 557.752519  | 510.1617364 | 604.1726288  | 550.3928445 | 633.3763094 | -0.225490696 | 1.077624718 | 0.935290579 |
| <b>B7L7S6</b> | TY-2482_chromosome | - | 1063519 | 1064616 | 23.2943362  | 17.03392422 | 10.76352469 | 56.64826198  | 72.66519535 | 68.75635041 | -1.970098876 | 9.512854736 | 9.0203257   |
| <b>B7L7S7</b> | TY-2482_chromosome | - | 1065007 | 1065750 | 1821.541724 | 1738.121067 | 1550.720677 | 3846.534761  | 4153.751955 | 5105.792609 | -1.364042488 | 11.32329139 | 10.79115079 |
| <b>B7L7S8</b> | TY-2482_chromosome | - | 1065767 | 1066330 | 494.2956351 | 490.6035951 | 527.0903529 | 505.1129099  | 487.7245409 | 523.6336858 | 0.011253487  | 0           | 0           |
| <b>B7L7S9</b> | TY-2482_chromosome | + | 1066546 | 1068276 | 2374.380846 | 2175.048506 | 2300.204519 | 2902.989251  | 3307.973476 | 2860.431531 | -0.386401427 | 1.830895375 | 1.628303866 |
| <b>D6HY23</b> | TY-2482_chromosome | + | 1068435 | 1068941 | 37.96931301 | 50.98651433 | 43.13937103 | 376.3311949  | 440.0202213 | 443.6528374 | -3.306967301 | 63.30929695 | 62.26519891 |
| <b>B7L7T1</b> | TY-2482_chromosome | - | 1069067 | 1069456 | 53.98404293 | 56.4784623  | 61.55338248 | 796.2117697  | 824.5280976 | 837.0680451 | -3.825590962 | 121.7126544 | 120.3723146 |
| <b>B7L7T2</b> | TY-2482_chromosome | - | 1069459 | 1071534 | 298.3089121 | 257.5799789 | 244.673115  | 5435.565522  | 5513.368906 | 5209.438613 | -4.32908754  | 97.14941262 | 95.92680923 |
| <b>B7L7T3</b> | TY-2482_chromosome | - | 1071530 | 1072675 | 87.20362922 | 66.5524882  | 79.03416526 | 2388.45471   | 2477.512458 | 2373.123389 | -4.905767857 | 262.3552306 | 260.5545831 |
| <b>B7L7T4</b> | TY-2482_chromosome | - | 1072880 | 1073521 | 719.5365221 | 599.9755899 | 685.2390175 | 4725.24306   | 4797.862022 | 3888.914398 | -2.705527735 | 48.50154165 | 48.65967992 |
| <b>B7L7T5</b> | TY-2482_chromosome | - | 1073535 | 1073921 | 462.0537036 | 509.547228  | 501.3442226 | 3196.26771   | 2928.275736 | 2833.287192 | -2.622520286 | 101.8246849 | 100.5903033 |
| <b>B7L7T6</b> | TY-2482_chromosome | - | 1073939 | 1074985 | 426.7467446 | 549.4617694 | 489.9315854 | 3554.775284  | 3262.8732   | 2920.45312  | -2.790177879 | 94.45689845 | 93.24292371 |
| <b>B7L7T7</b> | TY-2482_chromosome | - | 1074991 | 1075848 | 458.3871116 | 461.1205614 | 454.0815879 | 7819.432568  | 8067.735553 | 7111.490945 | -4.072792893 | 73.50439959 | 72.42983597 |
| <b>B7L7T8</b> | TY-2482_chromosome | - | 1075870 | 1077468 | 1050.113357 | 1156.826545 | 987.4293479 | 26929.498233 | 26745.49003 | 26243.98908 | -4.688104902 | 30.80415506 | 30.02931082 |
| <b>B7L7T9</b> | TY-2482_chromosome | - | 1077517 | 1079175 | 1510.19201  | 1593.372368 | 1554.570767 | 37009.91055  | 35654.94899 | 35695.21042 | -4.551980169 | 28.51303005 | 27.75824999 |
| <b>B7L7U0</b> | TY-2482_chromosome | - | 1079323 | 1079823 | 720.0032105 | 732.2872164 | 686.9731524 | 7249.717585  | 7028.848148 | 6770.122168 | -3.314992623 | 55.61862091 | 54.64544085 |
| <b>B7L7U1</b> | TY-2482_chromosome | - | 1079847 | 1081808 | 1609.171056 | 1676.131067 | 1564.797581 | 35576.75977  | 34167.55308 | 32289.9704  | -4.416222513 | 27.37159663 | 26.63045025 |
| <b>B7L7U2</b> | TY-2482_chromosome | - | 1081816 | 1082739 | 606.5542566 | 648.7486041 | 632.1694414 | 23471.32853  | 22515.69171 | 22588.56807 | -5.196968418 | 37.73881187 | 36.88749261 |
| <b>B7L7U3</b> | TY-2482_chromosome | - | 1082739 | 1083623 | 1049.891027 | 970.0702922 | 1071.636889 | 28808.01486  | 28708.26691 | 30264.83141 | -4.798405281 | 32.44783874 | 31.64719125 |
| <b>B7L7U4</b> | TY-2482_chromosome | - | 1083753 | 1084328 | 385.4135722 | 409.5991698 | 389.4494036 | 4243.515417  | 4306.394629 | 3656.13751  | -3.387273034 | 149.3144207 | 147.8516746 |
| <b>B7L7U5</b> | TY-2482_chromosome | - | 1084334 | 1084690 | 271.9913013 | 280.3369699 | 328.4779953 | 3449.383352  | 3165.480376 | 2891.989348 | -3.411167426 | 148.8748751 | 147.4146466 |
| <b>B7L7U6</b> | TY-2482_chromosome | + | 1085460 | 1085885 | 741.4751818 | 782.8565455 | 787.2525087 | 1182.511907  | 1030.271446 | 1216.698307 | -0.572364514 | 6.854208394 | 6.434001148 |
| <b>B7L7U7</b> | TY-2482_chromosome | - | 1085898 | 1087319 | 1843.284385 | 1829.184876 | 1929.393652 | 1217.104516  | 1184.862919 | 1187.695817 | 0.652244971  | 8.855315325 | 8.378194071 |
| <b>A1AC54</b> | TY-2482_chromosome | - | 1087297 | 1088151 | 1220.273293 | 1108.049792 | 1138.005676 | 324.5067507  | 285.3840196 | 291.1934079 | 1.955784816  | 70.69317363 | 69.60342509 |
| <b>B7L7U9</b> | TY-2482_chromosome | - | 1088264 | 1089250 | 718.6485477 | 163.8611353 | 176.6717928 | 286.8787281  | 291.717731  | 278.3326965 | -0.70242746  | 6.075776286 | 5.676240368 |
| <b>B7L7V0</b> | TY-2482_chromosome | - | 1089265 | 1090776 | 214.0759073 | 144.7774662 | 227.7813595 | 399.6963334  | 420.2505842 | 470.127743  | -1.019919341 | 11.80833602 | 11.27022974 |
| <b>B7L7V1</b> | TY-2482_chromosome | - | 1090849 | 1091835 | 80.20638388 | 89.02879666 | 95.94489257 | 276.3539723  | 285.3757291 | 282.6549512 | -1.667939494 | 21.6908298  | 21.01990484 |
| <b>B7L7V2</b> | TY-2482_chromosome | + | 1092632 | 1093132 | 789.4972912 | 718.602936  | 715.70275   | 2147.436687  | 1733.443176 | 1977.380182 | -1.389519303 | 34.96692286 | 34.1396371  |
| <b>C3T592</b> | TY-2482_chromosome | + | 1093217 | 1093486 | 360.2744075 | 313.9973777 | 319.1712335 | 404.2264918  | 466.7485143 | 490.3054859 | -0.430554006 | 3.215499301 | 2.933199136 |
| <b>isrB</b>   | TY-2482_chromosome | - | 1093546 | 1093705 | 109.1863419 | 100.8356807 | 58.75310712 | 46.41457648  | 105.6984755 | 125.3160636 | -0.092044951 | 0.050701861 | 0.039867059 |
| <b>B7L7V5</b> | TY-2482_chromosome | + | 1093929 | 1094249 | 33.40494633 | 43.61508447 | 48.35285716 | 1458.003932  | 1554.65367  | 1618.973291 | -5.209301935 | 222.6761064 | 220.9509597 |
| <b>B7L7V6</b> | TY-2482_chromosome | + | 1094424 | 1094918 | 2250.188999 | 2777.0225   | 2408.138296 | 6969.694443  | 7653.396528 | 7753.059135 | -1.639840376 | 6.838958907 | 6.419209295 |
| <b>B7L7V7</b> | TY-2482_chromosome | - | 1094962 | 1095198 | 298.1358685 | 376.7741724 | 319.1424803 | 729.6152688  | 890.2859601 | 923.5934148 | -1.408071943 | 24.39464243 | 23.68537247 |
| <b>B7L7V8</b> | TY-2482_chromosome | + | 1095388 | 1096596 | 299.1648209 | 295.7118351 | 308.8142448 | 1077.321975  | 1275.891792 | 1300.973148 | -2.000796988 | 63.06907622 | 62.02689984 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7L7V9 | TY-2482_chromosome | - | 1096664 | 1097326 | 1772.421278 | 2026.740252 | 2131.734495 | 1759.904987 | 1511.369503 | 1574.765474 | 0.283573651  | 1.942854514 | 1.732566269 |
| leuZ   | TY-2482_chromosome | - | 1097522 | 1097608 | 1080.341933 | 1084.987543 | 849.9014262 | 3703.62957  | 4079.571189 | 4157.500713 | -2.027660637 | 28.11476633 | 27.36245246 |
| cysT   | TY-2482_chromosome | - | 1097621 | 1097694 | 1806.877993 | 1678.219194 | 1560.69089  | 5672.31877  | 5971.156564 | 5873.097782 | -1.799323832 | 18.99916183 | 18.35893348 |
| glyY   | TY-2482_chromosome | - | 1097749 | 1097824 | 1901.583162 | 1931.936119 | 1783.259742 | 5319.166796 | 5592.226462 | 5545.33753  | -1.566808141 | 14.76272077 | 14.17604472 |
| B7L807 | TY-2482_chromosome | - | 1097979 | 1098524 | 2413.682484 | 2357.095942 | 2468.220951 | 1889.054712 | 1813.208734 | 1884.725751 | 0.35799558   | 2.845127666 | 2.581581631 |
| B7L8S5 | TY-2482_chromosome | - | 1098584 | 1100413 | 6867.145301 | 7131.584486 | 6679.554813 | 9302.987756 | 7845.865616 | 7221.518497 | -0.198451498 | 0.240338091 | 0.196721269 |
| B7L8S6 | TY-2482_chromosome | - | 1100413 | 1101066 | 4647.434965 | 5170.702538 | 5216.589429 | 4274.291134 | 4216.900617 | 4402.2932   | 0.212612448  | 0.352941259 | 0.292056333 |
| B7L8S8 | TY-2482_chromosome | + | 1101525 | 1101746 | 886.9255027 | 765.0725935 | 816.1449232 | 799.4464946 | 1064.536669 | 1131.515036 | -0.240661874 | 1.608295037 | 1.420699491 |
| B7L8S9 | TY-2482_chromosome | - | 1101820 | 1102539 | 1233.96084  | 1272.952713 | 1340.273335 | 750.3084248 | 823.6496496 | 895.5000579 | 0.651895657  | 9.046166006 | 8.563793243 |
| B7L8T0 | TY-2482_chromosome | - | 1102772 | 1103521 | 1034.763846 | 913.5980913 | 909.7162334 | 1192.522975 | 1331.208909 | 1115.419741 | -0.338197026 | 2.880051142 | 2.614585571 |
| B7L8T1 | TY-2482_chromosome | - | 1103521 | 1104186 | 973.1793146 | 816.9666983 | 955.2467562 | 1216.851873 | 1248.737834 | 1052.211567 | -0.315919674 | 2.815139248 | 2.553186372 |
| B7L8T2 | TY-2482_chromosome | - | 1104204 | 1105187 | 1859.040054 | 1772.282976 | 1659.759225 | 2039.722953 | 2163.82501  | 1962.741905 | -0.229299512 | 1.325970526 | 1.162610054 |
| B7L8T3 | TY-2482_chromosome | - | 1105295 | 1106092 | 6301.372219 | 6238.68336  | 6047.357836 | 5222.541621 | 4949.84109  | 5232.329266 | 0.266522339  | 0.439765305 | 0.366700253 |
| D3GXH3 | TY-2482_chromosome | - | 1106183 | 1106767 | 240.6569295 | 235.1234891 | 251.2949937 | 6120.662099 | 5506.171013 | 5700.793455 | -4.562364216 | 94.35256388 | 93.14001073 |
| B7L8T5 | TY-2482_chromosome | - | 1106780 | 1107496 | 716.8072952 | 690.943097  | 735.4957675 | 11941.01886 | 11186.89303 | 11836.50099 | -4.012232914 | 31.01110283 | 30.22875547 |
| B7L8T6 | TY-2482_chromosome | - | 1107663 | 1107950 | 4625.580874 | 4390.536281 | 4511.367189 | 80252.66854 | 77774.74099 | 71754.83767 | -4.079186132 | 22.24554481 | 21.56430358 |
| B7L8T6 | TY-2482_chromosome | - | 1107926 | 1108675 | 10829.75874 | 10734.25073 | 11183.4164  | 204981.046  | 180016.5605 | 171579.5961 | -4.084113564 | 21.03753435 | 20.37348704 |
| B7L8T7 | TY-2482_chromosome | + | 1108923 | 1110335 | 1709.962873 | 1722.536189 | 1734.133882 | 40046.68676 | 37505.81683 | 36956.07113 | -4.472257747 | 27.677594   | 26.93259576 |
| B7L8T8 | TY-2482_chromosome | + | 1110354 | 1110761 | 393.4236927 | 380.053045  | 412.1720261 | 12128.46284 | 11145.48583 | 10864.70329 | -4.832524335 | 41.49778402 | 40.62167752 |
| B7L8T9 | TY-2482_chromosome | + | 1110764 | 1111126 | 266.3745932 | 256.1887779 | 250.1617479 | 9288.755774 | 8867.059928 | 8782.539665 | -5.12550326  | 48.31927051 | 47.39478237 |
| B7L8U0 | TY-2482_chromosome | + | 1111207 | 1112691 | 2078.194426 | 2644.664311 | 2469.616003 | 8758.519997 | 8718.076941 | 9093.151038 | -1.925262243 | 8.876612087 | 8.398707143 |
| B7L8U1 | TY-2482_chromosome | - | 1112731 | 1113141 | 1695.058034 | 1639.397992 | 1600.691577 | 1192.896633 | 1240.866564 | 1219.98029  | 0.43249739   | 4.829669209 | 4.474803226 |
| B7L8U2 | TY-2482_chromosome | + | 1113328 | 1114530 | 3957.45017  | 3367.381858 | 4072.791551 | 2092.60423  | 1705.853957 | 1498.483876 | 1.146728612  | 9.205303286 | 8.719748864 |
| B7L8U3 | TY-2482_chromosome | + | 1114530 | 1114760 | 1025.679589 | 922.3804294 | 1140.25144  | 420.072579  | 401.059857  | 316.6390624 | 1.481454178  | 32.57567265 | 31.77115984 |
| E6BEB6 | TY-2482_chromosome | + | 1114872 | 1115366 | 184.0962928 | 133.6400237 | 142.6135758 | 73.79780737 | 85.56251841 | 96.88683556 | 0.896754641  | 5.306158238 | 4.930929397 |
| B7L8U5 | TY-2482_chromosome | + | 1115558 | 1116124 | 19.08606335 | 19.61810378 | 12.02646991 | 120.544636  | 156.5402033 | 131.903605  | -3.076282593 | 26.42802436 | 25.69682952 |
| B7L8U6 | TY-2482_chromosome | - | 1116287 | 1117081 | 46.48984172 | 67.31054657 | 61.56077153 | 486.8534281 | 615.5858245 | 527.8366152 | -3.267586252 | 68.48754204 | 67.41457991 |
| B7L8U7 | TY-2482_chromosome | - | 1117094 | 1117642 | 120.5451639 | 127.4362584 | 127.808966  | 761.7594331 | 843.3166683 | 794.996563  | -2.679894319 | 78.49563792 | 77.3620294  |
| B7L8U8 | TY-2482_chromosome | - | 1117814 | 1118323 | 249.2865247 | 329.2233161 | 244.7477157 | 1134.356438 | 1241.345583 | 1248.727521 | -2.227011618 | 63.36560611 | 62.31957787 |
| E9UHF9 | TY-2482_chromosome | + | 1118243 | 1118557 | 138.6486738 | 167.4918397 | 145.2641701 | 1419.164752 | 1465.326579 | 1449.72259  | -3.310536587 | 139.0677872 | 137.6436705 |
| B7L8U9 | TY-2482_chromosome | - | 1118490 | 1118801 | 93.88359935 | 162.5510891 | 106.7533879 | 2209.881917 | 2125.122363 | 2185.88906  | -4.313194526 | 169.9809436 | 168.4287971 |
| B7L8V0 | TY-2482_chromosome | + | 1119016 | 1120671 | 350.8172508 | 309.6023377 | 344.7241612 | 16916.72979 | 16559.30408 | 17153.00851 | -5.621209501 | 45.99967465 | 45.08886055 |
| B7L8V1 | TY-2482_chromosome | + | 1120667 | 1121659 | 352.0248113 | 293.0386232 | 309.0808744 | 11453.86626 | 11019.28114 | 10796.68617 | -5.096373642 | 45.34660353 | 44.4400196  |
| B7L8V2 | TY-2482_chromosome | + | 1121655 | 1122338 | 162.1408758 | 222.8964788 | 216.5783492 | 6785.963525 | 6483.177821 | 6658.028117 | -5.089200136 | 96.3019727  | 95.08081937 |
| B7L8V3 | TY-2482_chromosome | + | 1122341 | 1123711 | 226.677785  | 200.2037495 | 171.6295926 | 8560.215869 | 7987.059026 | 8003.571296 | -5.372201029 | 69.26059393 | 68.18245541 |
| B7L8V4 | TY-2482_chromosome | + | 1123733 | 1124173 | 49.81199308 | 30.14118601 | 47.20425305 | 2302.087338 | 2233.889807 | 2229.055563 | -5.627247743 | 284.1893699 | 282.2904359 |
| B7L8V5 | TY-2482_chromosome | + | 1124173 | 1125297 | 144.4424308 | 121.8287481 | 146.3355179 | 4914.014174 | 4436.1983   | 4541.509446 | -5.027410249 | 128.2400229 | 126.8618946 |
| B7L8V6 | TY-2482_chromosome | + | 1125405 | 1125866 | 144.8453024 | 154.2508234 | 146.6266068 | 5578.517256 | 5334.301642 | 5445.355606 | -5.214622025 | 136.410029  | 134.9950557 |
| B7L8V7 | TY-2482_chromosome | + | 1125874 | 1126875 | 271.4544939 | 258.0200466 | 280.0261808 | 9649.920722 | 9038.592757 | 9129.709991 | -5.084304001 | 47.54158887 | 46.62074111 |
| B7L8V8 | TY-2482_chromosome | + | 1126875 | 1127285 | 139.2607207 | 132.2834424 | 112.5971907 | 4307.783931 | 4433.266558 | 4300.322908 | -5.107416991 | 255.216742  | 253.4375455 |
| B7L8V9 | TY-2482_chromosome | + | 1127291 | 1127653 | 82.17718624 | 64.82033186 | 67.79058007 | 2695.115572 | 2841.233143 | 2861.37746  | -5.256210134 | 276.1781762 | 274.3124105 |
| B7L8W0 | TY-2482_chromosome | + | 1127656 | 1128390 | 74.48521777 | 71.8681159  | 64.96587377 | 2598.68294  | 2597.170678 | 2319.81747  | -5.169794969 | 263.3940394 | 261.5822556 |
| B7L8W1 | TY-2482_chromosome | + | 1128403 | 1128669 | 24.12128198 | 28.30836337 | 16.41259613 | 808.2523845 | 827.8803776 | 833.3257181 | -5.25686172  | 150.3517855 | 148.8813976 |
| B7L8W2 | TY-2482_chromosome | + | 1128681 | 1129463 | 38.52347743 | 27.1663868  | 34.49046037 | 773.7685959 | 846.2078897 | 803.7509645 | -4.531110571 | 139.449091  | 138.0203293 |
| B7L8W3 | TY-2482_chromosome | + | 1129756 | 1130376 | 39.26286272 | 43.43728411 | 41.66119035 | 79.91807305 | 90.21217164 | 79.84568435 | -1.026947126 | 4.777079715 | 4.424570832 |
| A1ACA1 | TY-2482_chromosome | + | 1130502 | 1130774 | 282.1931584 | 415.2413508 | 299.3066986 | 155.5538902 | 170.4494483 | 210.0100573 | 0.791222147  | 6.809029817 | 6.39060935  |
| Q1RAI1 | TY-2482_chromosome | - | 1130757 | 1131104 | 229.239896  | 1327.294748 | 1364.701705 | 326.1486577 | 341.1754161 | 283.8484372 | 0.234959367  | 77.29672183 | 76.17015609 |
| dsrA   | TY-2482_chromosome | - | 1131061 | 1131147 | 219.5479524 | 217.8996234 | 228.343646  | 43.20600202 | 57.02824109 | 35.89063048 | 2.290380438  | 36.69697444 | 35.85421901 |
| Q8ZS0  | TY-2482_chromosome | - | 1132026 | 1133852 | 1402.798827 | 1502.709823 | 1350.802885 | 519.1994799 | 539.104691  | 473.7058767 | 1.441705848  | 43.92166577 | 43.02616491 |
| B7L8X1 | TY-2482_chromosome | - | 1134287 | 1135201 | 763.4297843 | 984.5542284 | 966.5981207 | 401.2879489 | 382.1322595 | 307.4949633 | 1.274186374  | 24.05877133 | 23.35349185 |
| B7L8X2 | TY-2482_chromosome | + | 1135374 | 1136291 | 133.1077118 | 153.5113638 | 104.266013  | 217.4305517 | 190.3440671 | 173.3779315 | -0.665872297 | 2.898036818 | 2.631608287 |
| B7L8X3 | TY-2482_chromosome | - | 1136286 | 1136753 | 260.4241784 | 282.2189231 | 278.6685407 | 304.5131548 | 315.848148  | 278.9932691 | -0.146011254 | 0.490617107 | 0.409237957 |
| B7L8X4 | TY-2482_chromosome | - | 1136737 | 1138152 | 1030.312749 | 931.7272039 | 1041.464784 | 1603.157265 | 1715.713947 | 1548.39465  | -0.666618329 | 10.69544957 | 10.1747115  |
| D3GXL0 | TY-2482_chromosome | - | 1138222 | 1138950 | 817.3024028 | 742.0423105 | 794.4889187 | 415.0539717 | 429.9881624 | 379.3426618 | 0.962467853  | 16.84032641 | 16.22627052 |
| B7L8X6 | TY-2482_chromosome | - | 1138957 | 1139319 | 397.5943012 | 307.5024966 | 379.1192745 | 66.55885752 | 109.6094772 | 105.5949055 | 2.017755588  | 29.83377375 | 29.06593877 |

|               |                    |   |         |         |             |              |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7MWF2</b> | TY-2482_chromosome | + | 1139815 | 1140941 | 229.5677958 | 244.4032522  | 252.6924388 | 229.2862522 | 248.3603596 | 267.4396299 | -0.032237047 | 0.097654293 | 0.077533754 |
| <b>E9XVB1</b> | TY-2482_chromosome | + | 1140996 | 1141343 | 258.230374  | 240.777771   | 247.1880463 | 228.0654221 | 247.083319  | 222.5259137 | 0.107263616  | 0.315244029 | 0.26052082  |
| <b>D3GUS1</b> | TY-2482_chromosome | - | 1141269 | 1142417 | 652.9237943 | 565.0967722  | 607.787199  | 827.4812166 | 843.0494567 | 984.0518927 | -0.50463262  | 5.656249204 | 5.267391853 |
| <b>B7LDT8</b> | TY-2482_chromosome | - | 1142491 | 1143372 | 271.7710104 | 259.8052024  | 316.9854494 | 224.1041401 | 228.6707891 | 229.7435406 | 0.355603741  | 1.68440007  | 1.491275471 |
| <b>E1U309</b> | TY-2482_chromosome | + | 1143884 | 1144578 | 440.0034628 | 445.7497713  | 372.5627203 | 1096.299323 | 1243.53247  | 1246.022054 | -1.588715718 | 40.7732791  | 39.90043064 |
| <b>B7L8Y4</b> | TY-2482_chromosome | + | 1144664 | 1145512 | 408.8578134 | 497.1684475  | 459.8266181 | 750.9105428 | 757.3972219 | 747.1170209 | -0.721642713 | 9.264981693 | 77.75660482 |
| <b>B7L8Y5</b> | TY-2482_chromosome | - | 1145616 | 1146971 | 885.9241505 | 910.4847554  | 885.109528  | 879.9855684 | 858.0540286 | 835.8484363 | 0.048633304  | 0.239547559 | 0.196123073 |
| <b>D3GXL6</b> | TY-2482_chromosome | - | 1146974 | 1147690 | 695.2557306 | 640.3993616  | 629.5197496 | 729.2552857 | 643.9307434 | 729.9215065 | -0.091122914 | 0.411073089 | 0.341289617 |
| <b>B7L8Y7</b> | TY-2482_chromosome | + | 1147775 | 1148185 | 98.11090074 | 83.4082683   | 66.8483388  | 81.34832205 | 81.83794347 | 99.19056524 | -0.090253047 | 0.142902661 | 0.115430369 |
| <b>B7L8Y8</b> | TY-2482_chromosome | + | 1148297 | 1149298 | 170.3996999 | 139.4857537  | 173.5712851 | 117.6007881 | 114.7223776 | 124.0414869 | 0.498160044  | 2.13457529  | 1.911971901 |
| <b>B7L8Y9</b> | TY-2482_chromosome | + | 1149302 | 1149934 | 64.34983854 | 108.2207715  | 68.03114545 | 72.37747417 | 86.85418607 | 65.63299063 | -0.054247874 | 0.103196094 | 0.081797949 |
| <b>B7L8Z0</b> | TY-2482_chromosome | + | 1150194 | 1150841 | 271.7200505 | 292.9493341  | 281.633882  | 326.5871958 | 401.4356279 | 418.1085394 | -0.446259101 | 2.868352117 | 2.603687384 |
| <b>E2QNG5</b> | TY-2482_chromosome | + | 1150880 | 1151206 | 38.72065792 | 37.93864124  | 31.9633149  | 89.97533427 | 122.3322843 | 138.6545831 | -1.704765277 | 11.01883387 | 10.49257809 |
| <b>serU</b>   | TY-2482_chromosome | - | 1151514 | 1151603 | 164.7288062 | 231.67521176 | 150.1712025 | 285.5402835 | 410.0684558 | 375.4850611 | -1.089237436 | 7.625949936 | 7.18052839  |
| <b>D3GYI6</b> | TY-2482_chromosome | + | 1151658 | 1152491 | 958.9122121 | 939.6489057  | 942.5554633 | 838.1784892 | 608.8183862 | 641.2417619 | 0.438481435  | 3.828861635 | 3.519753143 |
| <b>asnV</b>   | TY-2482_chromosome | + | 1152595 | 1152670 | 403.7773836 | 389.9717611  | 274.0684251 | 1742.082364 | 2490.323569 | 2117.258177 | -2.625074945 | 69.45201264 | 68.37178616 |
| <b>B7L8Z2</b> | TY-2482_chromosome | + | 1152832 | 1154091 | 2007.186213 | 2064.252328  | 1823.610925 | 5656.955763 | 6091.535356 | 6245.777125 | -1.633771987 | 15.69849827 | 15.09504407 |
| <b>B7L8Z3</b> | TY-2482_chromosome | - | 1154291 | 1155592 | 129.8598233 | 106.2150029  | 136.1506772 | 83.9283553  | 311.7926749 | 329.5469746 | -1.247920027 | 14.8748662  | 14.28414076 |
| <b>B7L8Z4</b> | TY-2482_chromosome | - | 1155623 | 1157023 | 57.02936811 | 56.7078905   | 60.24373095 | 63.52217847 | 76.70041773 | 60.24690446 | -0.199176763 | 0.404452013 | 0.336096472 |
| <b>B7L8Z6</b> | TY-2482_chromosome | - | 1158685 | 1160484 | 47.54581646 | 50.78977669  | 55.77161632 | 56.59168895 | 55.19593884 | 58.57083124 | -0.137134079 | 0.2410378   | 0.197235416 |
| <b>B7L8Z7</b> | TY-2482_chromosome | + | 1160651 | 1161607 | 93.4515996  | 142.7876762  | 93.93743899 | 57.03985513 | 54.68644333 | 46.36512082 | 0.924560651  | 5.369427318 | 4.991714422 |
| <b>B7L8Z8</b> | TY-2482_chromosome | + | 1161783 | 1167905 | 208.7872016 | 156.4471826  | 179.7101449 | 286.8075316 | 327.6856188 | 307.0270491 | -0.703494692 | 6.07176806  | 5.672782817 |
| <b>B7L8Z9</b> | TY-2482_chromosome | + | 1167996 | 1177484 | 349.2876376 | 387.8057389  | 285.2524433 | 360.6811109 | 348.8628197 | 370.7439457 | -0.148902242 | 0.305322922 | 0.251820693 |
| <b>B7L900</b> | TY-2482_chromosome | + | 1177424 | 1178581 | 23.23639251 | 42.25247697  | 19.36668631 | 30.36178214 | 27.2286118  | 23.91956908 | -0.139301124 | 0.021743145 | 0.016843719 |
| <b>B7L901</b> | TY-2482_chromosome | + | 1178581 | 1179381 | 8.752445698 | 11.80878827  | 15.36766765 | 21.52022355 | 19.33675877 | 23.26542466 | -0.822058027 | 1.292300801 | 1.132725604 |
| <b>B7L902</b> | TY-2482_chromosome | + | 1179388 | 1180962 | 56.19946732 | 46.31620623  | 43.49818387 | 49.63260675 | 50.13263257 | 43.27872312 | 0.033143701  | 0.026039059 | 0.031143701 |
| <b>B7L903</b> | TY-2482_chromosome | + | 1181096 | 1183114 | 135.8363773 | 191.3800945  | 153.8923881 | 106.5015551 | 109.6765739 | 125.2761911 | 0.417723319  | 2.036006835 | 1.819747835 |
| <b>F1ZIR7</b> | TY-2482_chromosome | + | 1184444 | 1186950 | 389.9283941 | 353.5516359  | 390.6732552 | 344.9651775 | 330.6223667 | 381.6639489 | 0.133499235  | 0.405076125 | 0.336418534 |
| <b>B7L909</b> | TY-2482_chromosome | + | 1188103 | 1189416 | 845.9230912 | 975.9711493  | 991.0845766 | 1232.69769  | 1053.055538 | 1147.245128 | -0.301983929 | 2.121489333 | 1.899611583 |
| <b>B7L910</b> | TY-2482_chromosome | + | 1189521 | 1190972 | 2153.162494 | 1979.320275  | 1945.572898 | 3996.99956  | 3693.180383 | 3681.914386 | -0.899916703 | 6.278487017 | 5.872690034 |
| <b>B7L911</b> | TY-2482_chromosome | + | 1191318 | 1192031 | 2156.303187 | 2810.780917  | 2610.397601 | 1802.762465 | 2687.29635  | 0.067240184 | 0.234904335  | 0.169534176 | 0.259536156 |
| <b>A1ACI3</b> | TY-2482_chromosome | - | 1192093 | 1192374 | 13.53519473 | 22.40559932  | 15.90989391 | 133.1767598 | 146.9759004 | 122.392367  | -3.058827029 | 26.10541533 | 25.37795236 |
| <b>asnV</b>   | TY-2482_chromosome | - | 1192486 | 1192561 | 54.45354217 | 62.34743151  | 27.13088951 | 112.2013399 | 112.9219293 | 66.98977484 | -1.174034588 | 3.565660048 | 3.265672776 |
| <b>B7L912</b> | TY-2482_chromosome | - | 1192665 | 1194302 | 307.7756813 | 353.1922864  | 343.2797579 | 230.7479964 | 221.8278168 | 223.1856812 | 0.549161152  | 4.558575283 | 4.215943756 |
| <b>B7L913</b> | TY-2482_chromosome | - | 1194426 | 1195373 | 353.9627593 | 338.6380432  | 310.7047911 | 160.5718258 | 175.2921545 | 194.8309389 | 0.0913679042 | 10.20637769 | 9.695341737 |
| <b>B7L914</b> | TY-2482_chromosome | - | 1195478 | 1196392 | 112.1594009 | 98.99498317  | 120.3770529 | 161.3430578 | 189.5829031 | 184.7700212 | -0.643869241 | 4.016306044 | 3.697880646 |
| <b>asnV</b>   | TY-2482_chromosome | + | 1196719 | 1196794 | 13.78948801 | 13.16020548  | 3.601143837 | 68.46122828 | 99.35691304 | 77.9733754  | -3.116254805 | 16.9788263  | 16.36189903 |
| <b>B7L915</b> | TY-2482_chromosome | - | 1196853 | 1197782 | 2083.705266 | 1964.217764  | 2172.126997 | 1184.230761 | 1324.159356 | 1277.596046 | 0.743696692  | 10.59499249 | 10.07655685 |
| <b>B7L916</b> | TY-2482_chromosome | - | 1197850 | 1198926 | 831.5457847 | 1050.894395  | 999.7850423 | 1047.900804 | 974.2556293 | 913.399283  | -0.067545819 | 0.112209589 | 0.089254995 |
| <b>B7L917</b> | TY-2482_chromosome | - | 1198941 | 1199681 | 539.3240958 | 718.23958    | 732.2283465 | 562.1859364 | 569.8800088 | 552.7768399 | 0.212500315  | 1.215799328 | 1.062212773 |
| <b>B7L918</b> | TY-2482_chromosome | - | 1199681 | 1200223 | 448.2660078 | 631.4159673  | 568.7864003 | 374.5675086 | 342.502167  | 354.8679441 | 0.559060533  | 5.215662048 | 4.845359094 |
| <b>D8CLM5</b> | TY-2482_chromosome | - | 1200617 | 1200852 | 47.8011188  | 79.96908213  | 43.81115364 | 84.95034648 | 87.4235325  | 100.8929618 | -0.832138137 | 2.363368329 | 2.125540536 |
| <b>Q6EZC1</b> | TY-2482_chromosome | + | 1201798 | 1202144 | 205.7626745 | 10.70223372  | 17.25519731 | 20.13434776 | 32.26772896 | 27.71870363 | -0.609094362 | 1.294390443 | 1.134563918 |
| <b>B7L922</b> | TY-2482_chromosome | + | 1202286 | 1203497 | 67.53345744 | 105.4916943  | 73.62005136 | 85.51871279 | 99.63304933 | 102.0527076 | -0.332806835 | 0.585972246 | 0.493325891 |
| <b>B7L923</b> | TY-2482_chromosome | + | 1203514 | 1204269 | 90.87011341 | 72.84867871  | 95.91987576 | 80.80088035 | 96.94844172 | 90.24267767 | 0.020983625  | 0.043958595 | 0.034726357 |
| <b>C2DPG0</b> | TY-2482_chromosome | + | 1204329 | 1205291 | 52.06840187 | 51.04565166  | 53.1282557  | 67.30057127 | 123.3814228 | 131.0275883 | -1.017286902 | 4.461977357 | 4.123538263 |
| <b>B7L926</b> | TY-2482_chromosome | + | 1205297 | 1206328 | 167.2631457 | 152.8132679  | 165.1784011 | 229.8358689 | 264.8518914 | 284.5907975 | -0.65425625  | 4.784640808 | 4.431739962 |
| <b>D3GYL6</b> | TY-2482_chromosome | - | 1206374 | 1206699 | 55.70803794 | 53.74810227  | 69.85589656 | 120.5787419 | 126.7057829 | 159.3354461 | -1.125609493 | 7.56282442  | 7.118372282 |
| <b>B7L930</b> | TY-2482_chromosome | - | 1206986 | 1208362 | 350.7695624 | 377.3734231  | 278.1053885 | 420.1599606 | 388.8935923 | 445.0861502 | -0.38071381  | 1.791495424 | 1.591489537 |
| <b>B7L931</b> | TY-2482_chromosome | - | 1208649 | 1209143 | 36.37022968 | 37.69459372  | 15.50301468 | 39.12759636 | 51.28798909 | 47.52421109 | -0.737680809 | 1.369690328 | 1.202380168 |
| <b>E9TFH8</b> | TY-2482_chromosome | - | 1210432 | 1210748 | 90.29782282 | 86.31208022  | 63.98410013 | 93.18638218 | 96.8189519  | 80.47888763 | -0.202268219 | 0.350221888 | 0.289937092 |
| <b>Q0TGB3</b> | TY-2482_chromosome | + | 1211074 | 1211421 | 41.03563219 | 51.55248023  | 43.22821555 | 40.85032862 | 38.53359132 | 48.4407417  | 0.036888703  | 0.093461252 | 0.077396092 |
| <b>B7L934</b> | TY-2482_chromosome | + | 1211600 | 1212004 | 30.097334   | 41.79789819  | 41.35839175 | 21.11617835 | 19.9712437  | 29.39361899 | 0.657107255  | 1.568419147 | 1.385223245 |
| <b>C8TTS1</b> | TY-2482_chromosome | + | 1211947 | 1212700 | 99.62678928 | 79.48750616  | 68.22409273 | 72.78867341 | 59.47243526 | 64.31596161 | 0.327662446  | 0.900014021 | 0.772982295 |
| <b>B7L936</b> | TY-2482_chromosome | + | 1213131 | 1213388 | 68.30886119 | 74.94748424  | 63.50766539 | 54.45266519 | 58.48465643 | 55.61117623 | 0.254008526  | 0.706579514 | 0.600370608 |

|                |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7L938</b>  | TY-2482_chromosome | - | 1213665 | 1215197 | 798.4091688 | 886.0749165 | 823.3531397 | 590.3659286 | 546.0084624 | 572.2400984 | 0.526317709  | 6.565540649 | 6.152823381  |
| <b>B7L939</b>  | TY-2482_chromosome | - | 1215250 | 1215594 | 23.18360935 | 3.916132292 | 14.60509602 | 19.30889007 | 19.52304376 | 22.36428952 | -0.281786727 | 0.848280451 | 0.726922831  |
| <b>D8APM5</b>  | TY-2482_chromosome | + | 1216020 | 1216335 | 46.81020187 | 29.95725204 | 48.48810688 | 41.85733002 | 47.13740928 | 36.22453861 | 0.099890928  | 0           | 0            |
| <b>D7ZIU0</b>  | TY-2482_chromosome | - | 1216325 | 1216531 | 53.83149446 | 62.94859452 | 51.97550039 | 52.23380711 | 50.57752795 | 53.48016272 | 0.059612236  | 0.158019818 | 0.127384948  |
| <b>Q0TGA2</b>  | TY-2482_chromosome | - | 1216568 | 1216960 | 236.6619511 | 339.3042661 | 258.933461  | 148.7276079 | 211.2760744 | 249.0141988 | 0.73356491   | 1.839169302 | 1.636022607  |
| <b>B7L940</b>  | TY-2482_chromosome | + | 1217530 | 1218690 | 892.5776086 | 948.721845  | 919.5447954 | 187.652434  | 187.7535725 | 257.4659875 | -1.339570744 | 25.61198543 | 24.890606084 |
| <b>C8TV65</b>  | TY-2482_chromosome | + | 1218660 | 1219645 | 57.7998088  | 46.74038923 | 44.91714676 | 169.0944283 | 197.6775037 | 217.9579399 | -1.945457252 | 20.18313474 | 19.53135533  |
| <b>B7L943</b>  | TY-2482_chromosome | + | 1219866 | 1222259 | 123.8392983 | 145.3810114 | 122.3896279 | 143.9873871 | 122.3147703 | 140.5761031 | -0.105855966 | 0.144796737 | 0.116768014  |
| <b>B7L944</b>  | TY-2482_chromosome | + | 1222259 | 1223161 | 106.9931607 | 100.6673433 | 96.49243744 | 44.78424812 | 41.32093042 | 55.55304606 | 1.105794962  | 7.043134348 | 6.617629358  |
| <b>B7L945</b>  | TY-2482_chromosome | + | 1223161 | 1224228 | 69.27390331 | 99.398543   | 87.5156615  | 38.69599517 | 31.83132943 | 35.41243185 | 1.206993036  | 7.243342268 | 6.810121248  |
| <b>B7L946</b>  | TY-2482_chromosome | + | 1224259 | 1225047 | 172.2156213 | 207.1300489 | 134.5352585 | 162.9034933 | 248.8430131 | 283.0707396 | -0.520736392 | 1.599370502 | 1.412845636  |
| <b>B7L947</b>  | TY-2482_chromosome | + | 1225066 | 1225473 | 115.5292812 | 125.3981545 | 112.2730882 | 81.20807626 | 97.76350505 | 112.2181158 | 0.25800026   | 0.820809604 | 0.701975624  |
| <b>D8EDM7</b>  | TY-2482_chromosome | - | 1225476 | 1225709 | 57.95193342 | 54.40899252 | 43.65148008 | 28.69580453 | 31.89601295 | 33.85849681 | 0.695875115  | 2.261284886 | 2.0310621    |
| <b>B2TXM8</b>  | TY-2482_chromosome | - | 1225706 | 1226545 | 27.73900514 | 21.61202791 | 32.64189687 | 34.91141775 | 36.50529523 | 36.87124548 | -0.324110554 | 0.710531663 | 0.603878125  |
| <b>Q5K5L6</b>  | TY-2482_chromosome | - | 1226588 | 1227559 | 82.0845351  | 52.70084959 | 73.19225824 | 121.1165111 | 122.8471307 | 127.6493299 | -0.746278344 | 4.266898979 | 3.93858201   |
| <b>E9TQB2</b>  | TY-2482_chromosome | + | 1228180 | 1228756 | 110.5567966 | 139.7128429 | 87.08561499 | 103.2673063 | 120.4516576 | 109.9224653 | -0.096981986 | 0.008351482 | 0.006433294  |
| <b>D7YLU2</b>  | TY-2482_chromosome | + | 1228759 | 1229073 | 66.58586985 | 66.50792944 | 63.36058154 | 75.059274   | 73.79889801 | 72.6108466  | -0.184447846 | 0.35824459  | 0.296658461  |
| <b>Q1RA65</b>  | TY-2482_chromosome | + | 1229391 | 1229744 | 141.2504381 | 138.720047  | 130.961687  | 166.1063496 | 154.1385905 | 197.3858243 | -0.335509663 | 1.294118992 | 1.13441815   |
| <b>B7L9N3</b>  | TY-2482_chromosome | - | 1229851 | 1230243 | 5820.776033 | 6463.905215 | 6121.954682 | 7513.188456 | 7361.403309 | 7812.406913 | -0.322921038 | 0.478978168 | 0.398751688  |
| <b>C8U552</b>  | TY-2482_chromosome | - | 1230352 | 1230882 | 85.47154807 | 96.64784398 | 121.328531  | 313.6264031 | 321.1738085 | 359.1092663 | -1.676614694 | 22.62637601 | 21.93967187  |
| <b>B7L9F78</b> | TY-2482_chromosome | - | 1230965 | 1231942 | 1073.573421 | 1259.217531 | 1292.730544 | 1432.142335 | 1397.163943 | 1417.020523 | -0.240555081 | 1.565676945 | 1.382613673  |
| <b>B3WPJ5</b>  | TY-2482_chromosome | - | 1232009 | 1232686 | 52.7885461  | 48.0088096  | 49.05707077 | 60.3264349  | 59.6316739  | 609.1112762 | 1.714272617  | 1.519107477 |              |
| <b>D8B6I8</b>  | TY-2482_chromosome | - | 1232887 | 1233384 | 767.8490524 | 938.8591408 | 827.6854203 | 777.6850219 | 685.1582546 | 736.1338457 | 0.154661561  | 1.107348997 | 0.962107436  |
| <b>B7L9N6</b>  | TY-2482_chromosome | - | 1233479 | 1234642 | 107.0823132 | 80.33064703 | 115.8764079 | 105.1196938 | 109.1148553 | 134.3415773 | -0.107051332 | 0.437073293 | 0.364522626  |
| <b>B7L9N7</b>  | TY-2482_chromosome | - | 1234851 | 1236275 | 2556.255407 | 2270.005941 | 2396.527836 | 2183.181953 | 1885.201822 | 2014.087982 | 0.269011273  | 1.570925327 | 1.387065671  |
| <b>B7L9N8</b>  | TY-2482_chromosome | - | 1236324 | 1236548 | 1988.248517 | 2365.797193 | 1965.819554 | 231.2495822 | 251.2923537 | 225.7441824 | 0.397683425  | 162.4649309 | 160.9427475  |
| <b>B7L9N9</b>  | TY-2482_chromosome | - | 1236565 | 1237620 | 4563.875339 | 4472.576562 | 4412.316422 | 114.8506002 | 149.1462825 | 167.0949841 | 4.973465256  | 176.7705666 | 175.1961437  |
| <b>B7L9P0</b>  | TY-2482_chromosome | - | 1237802 | 1239157 | 3040.155488 | 2460.739418 | 2633.713026 | 3935.829246 | 6211.447301 | 5659.924819 | -0.912807848 | 5.22091348  | 4.849793416  |
| <b>B7L9P1</b>  | TY-2482_chromosome | - | 1239427 | 1240353 | 833.5368459 | 779.3877489 | 783.1536973 | 931.3214755 | 991.9813566 | 1021.341919 | -0.286109965 | 2.366916744 | 2.128637424  |
| <b>B7L9P2</b>  | TY-2482_chromosome | - | 1240402 | 1241223 | 3461.171159 | 2876.444199 | 2982.895105 | 3348.822586 | 3365.097043 | 3568.648809 | -0.11169217  | 0.333668774 | 0.276272976  |
| <b>B7L9P3</b>  | TY-2482_chromosome | - | 1241309 | 1241560 | 520.3681916 | 579.606217  | 511.7361274 | 615.3685443 | 594.8452005 | 604.8963116 | -0.20878106  | 0.937029556 | 0.80706751   |
| <b>A1ACN0</b>  | TY-2482_chromosome | - | 1241560 | 1241835 | 598.1643139 | 584.7380376 | 607.683945  | 657.4387704 | 660.7660619 | 685.1679537 | -0.151059043 | 0.850457871 | 0.728754979  |
| <b>B7L9P6</b>  | TY-2482_chromosome | + | 1242288 | 1243184 | 1239.440654 | 1037.712569 | 1097.825456 | 3453.910125 | 3331.759998 | 3057.847586 | -1.518451359 | 37.9654404  | 37.111643    |
| <b>B7L9P7</b>  | TY-2482_chromosome | + | 1243193 | 1244494 | 1546.886467 | 1386.006827 | 1418.204274 | 3787.628749 | 3651.619871 | 3173.186487 | -1.275831874 | 13.34413929 | 12.78531541  |
| <b>B7L9P8</b>  | TY-2482_chromosome | + | 1244494 | 1245561 | 1306.536692 | 1277.277532 | 1188.488534 | 2459.6826   | 2586.07636  | 2202.791489 | -0.957435949 | 15.94483756 | 15.33923429  |
| <b>B7L9P9</b>  | TY-2482_chromosome | + | 1245564 | 1246628 | 1466.26019  | 1376.731138 | 1644.578944 | 2535.846728 | 2438.479451 | 2159.954838 | -0.634086895 | 7.92841497  | 7.475653062  |
| <b>B7L9Q0</b>  | TY-2482_chromosome | + | 1246631 | 1247218 | 824.1436494 | 843.8902242 | 820.4621896 | 1344.314861 | 1307.681116 | 1146.177707 | -0.623828029 | 8.104292444 | 7.646067639  |
| <b>B7L9Q1</b>  | TY-2482_chromosome | + | 1247221 | 1247955 | 1175.150019 | 1209.737145 | 1130.918191 | 1745.539004 | 1668.661829 | 1649.362073 | -0.544489981 | 6.650159131 | 6.235185783  |
| <b>B7L9Q2</b>  | TY-2482_chromosome | + | 1247940 | 1248713 | 1163.821627 | 1087.240216 | 1249.630216 | 2014.072396 | 1972.614179 | 1865.610301 | -0.710596221 | 10.58381992 | 10.06624455  |
| <b>B7L9Q3</b>  | TY-2482_chromosome | + | 1248710 | 1249318 | 1340.709227 | 1209.388581 | 1337.470865 | 2526.847953 | 2521.199665 | 2269.663809 | -0.886469795 | 15.12135292 | 14.52688206  |
| <b>B7L9Q4</b>  | TY-2482_chromosome | - | 1249422 | 1250399 | 1137.986898 | 1044.69893  | 1321.152746 | 2577.944536 | 2975.465658 | 2796.812064 | -1.197742304 | 24.55966185 | 23.84771105  |
| <b>B7L9Q5</b>  | TY-2482_chromosome | - | 1250546 | 1251709 | 517.0359219 | 527.9992747 | 534.4236041 | 593.3767636 | 704.5371213 | 570.311664  | -0.244962742 | 1.383603841 | 1.215200977  |
| <b>B7L9Q6</b>  | TY-2482_chromosome | - | 1251960 | 1253363 | 28568.68823 | 27263.13948 | 30053.29755 | 26169.20435 | 25486.2621  | 24270.62081 | 0.198948815  | 0.208825716 | 0.169706421  |
| <b>B7L9Q7</b>  | TY-2482_chromosome | - | 1253487 | 1254302 | 2116.788031 | 2408.551002 | 2337.481571 | 1762.845581 | 2400.145684 | 2246.03368  | 0.084611492  | 0.36444193  | 0.301032772  |
| <b>B7L9Q8</b>  | TY-2482_chromosome | - | 1254318 | 1255610 | 2152.288771 | 2119.793153 | 2443.437268 | 1832.892144 | 2627.718416 | 2432.997949 | -0.001189895 | 0.098594553 | 0.078070766  |
| <b>B7L9Q9</b>  | TY-2482_chromosome | - | 1255595 | 1256815 | 1582.540052 | 1289.837559 | 1518.473257 | 1145.989546 | 1962.691578 | 1758.238088 | -0.086041612 | 0.490095148 | 0.408925801  |
| <b>Q93NP8</b>  | TY-2482_chromosome | - | 1256824 | 1257933 | 904.3968612 | 904.3968612 | 1134.24693  | 448.9012399 | 834.9899231 | 832.5676428 | 0.536157821  | 2.49338921  | 2.247514479  |
| <b>B7L9R0</b>  | TY-2482_chromosome | - | 1257933 | 1258880 | 1034.120905 | 1168.616701 | 1061.897401 | 504.4432596 | 975.6790259 | 846.2611621 | 0.468331333  | 2.781172307 | 2.520965181  |
| <b>B7L9R1</b>  | TY-2482_chromosome | - | 1258968 | 1260128 | 4117.212987 | 4392.399235 | 4137.914201 | 1579.186167 | 3202.53456  | 2892.935371 | 0.716784712  | 2.747493919 | 2.488236071  |
| <b>B7L9R2</b>  | TY-2482_chromosome | - | 1260128 | 1261390 | 4956.293987 | 5707.97121  | 5476.757703 | 2072.721493 | 3962.728372 | 3184.657263 | 0.793202862  | 2.595345175 | 2.343763064  |
| <b>B7L9R3</b>  | TY-2482_chromosome | - | 1261399 | 1262436 | 6615.706608 | 7359.375954 | 7371.710458 | 2545.792714 | 4930.486274 | 4347.563191 | 0.854028781  | 2.084551669 | 1.864266069  |
| <b>B7L9R4</b>  | TY-2482_chromosome | - | 1262444 | 1263061 | 2747.86267  | 3533.112483 | 3267.020256 | 1271.074836 | 2306.014266 | 2090.324413 | 0.720450932  | 3.744087871 | 3.437453998  |
| <b>B7L9R5</b>  | TY-2482_chromosome | - | 1263425 | 1264315 | 3989.202798 | 4273.062901 | 4701.991223 | 5315.701811 | 5304.102442 | 4670.931518 | -0.23130241  | 0.382863366 | 0.316438251  |
| <b>B7L9R6</b>  | TY-2482_chromosome | - | 1264561 | 1265553 | 4843.781665 | 4901.145393 | 5216.563458 | 7033.366147 | 7650.636619 | 7145.443036 | -0.534196642 | 1.140776729 | 0.992730505  |
| <b>B7L9R7</b>  | TY-2482_chromosome | - | 1265714 | 1267105 | 132.3451318 | 95.36134678 | 110.7876092 | 98.07152337 | 108.7919293 | 110.6945852 | 0.151489411  | 0.241500607 | 0.197491744  |

|               |                    |   |         |         |             |             |             |             |             |             |              |              |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| <b>B7L9R8</b> | TY-2482_chromosome | - | 1267119 | 1268336 | 62.70694236 | 51.96135056 | 49.23485292 | 47.30254784 | 43.36219976 | 34.19401589 | 0.391010742  | 0.950638815  | 0.819390604 |
| <b>B7L9R9</b> | TY-2482_chromosome | - | 1268336 | 1269613 | 145.3339002 | 106.2151453 | 120.8754728 | 210.592627  | 221.3772494 | 245.8669158 | -0.806178431 | 6.237713363  | 5.8330223   |
| <b>E116L3</b> | TY-2482_chromosome | - | 1269624 | 1269893 | 2.398624587 | 8.978544439 | 9.618905718 | 15.94924212 | 26.14344083 | 19.08783809 | -1.596213899 | 2.981725262  | 2.711099056 |
| <b>B7L9S0</b> | TY-2482_chromosome | - | 1269901 | 1271376 | 15.78575217 | 26.41371632 | 30.91813409 | 24.03095831 | 20.4138805  | 18.44057014 | 0.193644205  | 0.252051113  | 0.206506232 |
| <b>B7L9S1</b> | TY-2482_chromosome | - | 1271381 | 1272772 | 35.58494533 | 23.44077737 | 38.41525145 | 17.52660403 | 25.18880616 | 24.18248741 | 0.647836992  | 1.140945865  | 0.992732768 |
| <b>B7L9S2</b> | TY-2482_chromosome | - | 1272830 | 1274197 | 35.80819765 | 37.90621531 | 34.6153933  | 32.75038447 | 28.81117333 | 26.77339697 | 0.263475436  | 0.478509972  | 0.398388128 |
| <b>B7L9S3</b> | TY-2482_chromosome | - | 1274657 | 1276090 | 51.45161647 | 34.37805283 | 47.32184492 | 41.49774502 | 30.42787652 | 33.36000674 | 0.412076628  | 0.715154818  | 0.60803456  |
| <b>B7L9S4</b> | TY-2482_chromosome | - | 1276096 | 1277316 | 38.98437718 | 38.93964741 | 37.45933361 | 29.33149974 | 28.24591448 | 43.02807978 | 0.199435596  | 0.266895878  | 0.219511379 |
| <b>B7L9S6</b> | TY-2482_chromosome | - | 1277798 | 1278760 | 35.22896645 | 29.30384323 | 27.61682654 | 15.38988186 | 24.49147398 | 22.81879462 | 0.565965211  | 1.032663926  | 0.893817149 |
| <b>B7L9S7</b> | TY-2482_chromosome | - | 1278766 | 1279884 | 45.2661663  | 43.98583846 | 39.0830775  | 27.77600987 | 30.09513267 | 30.22156034 | 0.612283429  | 1.600167513  | 1.413508956 |
| <b>B7L9T0</b> | TY-2482_chromosome | - | 1281235 | 1282449 | 28.56381195 | 16.55611814 | 23.08042233 | 24.99092459 | 26.02985099 | 25.75546642 | -0.08632827  | 0.170817455  | 0.137936229 |
| <b>B7L9T1</b> | TY-2482_chromosome | - | 1282427 | 1283641 | 44.23634665 | 59.5184718  | 42.06194133 | 32.57752954 | 33.55758135 | 33.6025039  | 0.453651969  | 1.297254164  | 1.136924547 |
| <b>B7L9T3</b> | TY-2482_chromosome | - | 1284132 | 1284968 | 64.29959705 | 55.9805386  | 47.93957987 | 84.07427944 | 96.79401267 | 93.53085515 | -0.714134688 | 2.92416603   | 2.656504211 |
| <b>B7L9T4</b> | TY-2482_chromosome | - | 1285149 | 1287308 | 70.56659935 | 45.80454099 | 57.60641188 | 82.03679733 | 95.06741761 | 115.1247135 | -0.664047644 | 2.939015273  | 2.670654394 |
| <b>B7L9T7</b> | TY-2482_chromosome | + | 1289558 | 1291138 | 4011.344199 | 3846.548538 | 4094.573832 | 4599.768707 | 4453.265608 | 4316.304474 | -0.147255816 | 0.287710681  | 0.237503233 |
| <b>B7L9T8</b> | TY-2482_chromosome | - | 1291418 | 1293268 | 2535.19873  | 2384.216719 | 2311.944988 | 3877.165075 | 3794.165927 | 3545.034395 | -0.6350893   | 3.198760111  | 2.917126042 |
| <b>B7L9T9</b> | TY-2482_chromosome | - | 1293293 | 1293871 | 2568.766665 | 2044.622062 | 2225.656611 | 3536.563949 | 3611.294835 | 3409.812963 | -0.587163099 | 3.222312473  | 2.939178248 |
| <b>B7L9U0</b> | TY-2482_chromosome | - | 1293966 | 1294604 | 604.8421036 | 576.043762  | 673.4165941 | 2112.139325 | 2301.013208 | 2165.977841 | -1.792176722 | 60.24120186  | 59.22866902 |
| <b>B7L9U1</b> | TY-2482_chromosome | + | 1294922 | 1298236 | 2535.649045 | 2659.278605 | 2481.423564 | 2023.311234 | 1910.738431 | 1897.040291 | 0.375577764  | 3.532941192  | 3.234340336 |
| <b>B7L9U2</b> | TY-2482_chromosome | - | 1298281 | 1299135 | 438.7411134 | 408.3121896 | 439.5591351 | 234.9527223 | 249.1493351 | 269.2534695 | 0.797418774  | 9.155221795  | 8.670464975 |
| <b>B7L9U3</b> | TY-2482_chromosome | + | 1299269 | 1300618 | 492.0389066 | 385.8400253 | 496.7491842 | 620.5075323 | 813.3727009 | 798.7241898 | -0.62303883  | 6.663579988  | 6.248154014 |
| <b>B7L9U4</b> | TY-2482_chromosome | - | 1300636 | 1302582 | 521.5158057 | 276.9560248 | 315.9574676 | 277.2956628 | 305.6878251 | 298.8437472 | 0.093146072  | 0.190214428  | 0.154130842 |
| <b>B7L9U5</b> | TY-2482_chromosome | - | 1302573 | 1303331 | 53.73373292 | 62.47332728 | 49.20357339 | 60.04810782 | 63.00732973 | 77.64968975 | -0.329021865 | 0.665457545  | 0.563009746 |
| <b>B7L9U6</b> | TY-2482_chromosome | - | 1303331 | 1303987 | 11.76478531 | 18.11300474 | 13.04736117 | 23.79884246 | 22.78565363 | 26.50529313 | -0.858130193 | 1.368171049  | 1.201119847 |
| <b>ryeC</b>   | TY-2482_chromosome | + | 1304134 | 1304282 | 125.4067066 | 108.87028   | 72.97201442 | 104.8978991 | 107.9424962 | 81.96381649 | 0.005756438  | 0.083376747  | 0.066150794 |
| <b>ryeD</b>   | TY-2482_chromosome | + | 1304469 | 1304611 | 157.8954866 | 111.2080999 | 114.0230653 | 201.1855667 | 218.4029766 | 120.3597947 | -0.674990422 | 4.2711145012 | 3.942642724 |
| <b>ryeD</b>   | TY-2482_chromosome | + | 1304797 | 1304939 | 48.54119662 | 52.15716782 | 39.28964367 | 78.30254072 | 76.36471176 | 91.24240331 | -0.862104371 | 3.384360617  | 3.09364689  |
| <b>B7L9U7</b> | TY-2482_chromosome | + | 1305203 | 1306447 | 192.6380077 | 158.9192696 | 159.8060056 | 194.4959027 | 205.7410899 | 199.7532416 | -0.208841721 | 0.809135644  | 0.691786043 |
| <b>B7L9U8</b> | TY-2482_chromosome | + | 1306450 | 1309569 | 395.5314772 | 487.8122637 | 405.4480243 | 379.4962478 | 403.2679089 | 343.8121784 | 0.128797351  | 0.760556185  | 0.648305991 |
| <b>B7L9U9</b> | TY-2482_chromosome | + | 1309573 | 1312647 | 577.8219167 | 522.1015613 | 451.7809032 | 336.3431765 | 361.318933  | 372.6779841 | 0.524977733  | 4.583654704  | 4.240064681 |
| <b>B7L9V0</b> | TY-2482_chromosome | + | 1312651 | 1314063 | 182.6492804 | 227.5462629 | 194.1282533 | 179.4922459 | 157.377458  | 203.2845286 | 0.111079736  | 0.431210083  | 0.359481165 |
| <b>B7L9V1</b> | TY-2482_chromosome | + | 1314063 | 1315463 | 267.9657484 | 237.3052763 | 265.6860237 | 246.2880467 | 249.4169716 | 227.9808907 | 0.120824168  | 0.324840026  | 0.268237823 |
| <b>B7L9V2</b> | TY-2482_chromosome | + | 1315463 | 1316182 | 874.3010213 | 860.9691076 | 823.4550865 | 603.8865805 | 513.8950817 | 549.5824646 | 0.608351668  | 7.99785256   | 7.542367793 |
| <b>B7L9V3</b> | TY-2482_chromosome | + | 1316376 | 1316705 | 180.0683402 | 154.1973233 | 172.3725278 | 61.68780011 | 84.67651526 | 75.56655076 | 1.228822144  | 10.74501242  | 10.22253947 |
| <b>B7L9V4</b> | TY-2482_chromosome | + | 1316917 | 1317120 | 343.2761563 | 365.943803  | 364.8675872 | 351.4729308 | 424.151671  | 425.739843  | -0.163960654 | 0.684895786  | 0.580792688 |
| <b>B7L9V5</b> | TY-2482_chromosome | + | 1317215 | 1317508 | 285.9905194 | 302.3753121 | 257.6018078 | 349.6090153 | 356.4639778 | 389.3875998 | -0.405729928 | 2.333411758  | 2.098133794 |
| <b>B7L9V6</b> | TY-2482_chromosome | + | 1317614 | 1318972 | 646.7651573 | 618.1101118 | 629.3420048 | 2584.147274 | 3430.661746 | 3201.268911 | -2.268428826 | 70.28442159  | 69.19787032 |
| <b>ryeE</b>   | TY-2482_chromosome | + | 1319058 | 1319143 | 32.59713762 | 33.42986671 | 33.06658553 | 73.74183751 | 107.990032  | 77.22104785 | -1.392977287 | 7.140945536  | 6.712883815 |
| <b>D3GZE6</b> | TY-2482_chromosome | - | 1319260 | 1319682 | 25.96339399 | 29.96991105 | 21.91714903 | 19.71297632 | 19.98889949 | 30.50805847 | 0.095059507  | 0.138030534  | 0.111502059 |
| <b>B7L9V9</b> | TY-2482_chromosome | + | 1320037 | 1320933 | 313.6091181 | 301.3457916 | 307.4985048 | 174.3576703 | 171.5016601 | 174.4733327 | 0.833233318  | 8.925587461  | 8.446110883 |
| <b>B7L9W0</b> | TY-2482_chromosome | + | 1321021 | 1321797 | 733.1977274 | 729.2387435 | 772.8100707 | 646.6539199 | 617.1474233 | 601.4725275 | 0.27001771   | 1.876097872  | 1.670304305 |
| <b>B7L9W1</b> | TY-2482_chromosome | + | 1321900 | 1322937 | 37.18431748 | 30.95185952 | 35.8873087  | 37.53438412 | 40.22724604 | 43.06748496 | -0.1781613   | 0.317366411  | 0.262302351 |
| <b>B7L9W2</b> | TY-2482_chromosome | - | 1322988 | 1324340 | 34.6943739  | 49.26788458 | 37.53575203 | 36.79162049 | 48.32326126 | 56.57783634 | -0.294000932 | 0.396719114  | 0.328872412 |
| <b>C6V1J1</b> | TY-2482_chromosome | - | 1325124 | 1326378 | 14.97292989 | 16.96220932 | 18.49951523 | 26.67629063 | 22.8005847  | 23.29164757 | -0.537454963 | 0.830223753  | 0.710169813 |
| <b>B7L9W8</b> | TY-2482_chromosome | - | 1327574 | 1328623 | 964.3086617 | 1075.570924 | 1038.726177 | 223.5839592 | 206.4234191 | 186.8023886 | 2.293622395  | 85.83794642  | 84.66211608 |
| <b>B7L9W9</b> | TY-2482_chromosome | + | 1328880 | 1330154 | 75.25988659 | 87.07702645 | 84.66631491 | 105.7488048 | 117.2952661 | 113.264618  | -0.464994573 | 1.659664109  | 1.468165069 |
| <b>B7L9X0</b> | TY-2482_chromosome | + | 1330154 | 1331155 | 223.7799643 | 184.9228174 | 242.3479088 | 280.6309692 | 270.4673371 | 225.7136175 | -0.191094525 | 0.901709159  | 0.774442454 |
| <b>B7L9X1</b> | TY-2482_chromosome | + | 1331155 | 1332117 | 295.8448802 | 290.0622647 | 298.8142977 | 332.959438  | 292.9995675 | 289.6908859 | -0.046849459 | 0.137795668  | 0.111434103 |
| <b>B7L9X2</b> | TY-2482_chromosome | - | 1332097 | 1332840 | 492.4067244 | 448.3980009 | 508.3869782 | 394.2464237 | 323.383988  | 334.8377538 | 0.489231027  | 3.696027975  | 3.391854701 |
| <b>E7IBA7</b> | TY-2482_chromosome | - | 1332895 | 1333738 | 42.59863644 | 45.10385208 | 48.65001378 | 39.19215704 | 35.76600538 | 39.21209846 | 0.259026352  | 0.461227854  | 0.384460635 |
| <b>B7L9X4</b> | TY-2482_chromosome | - | 1333778 | 1334575 | 136.6018177 | 147.3476463 | 129.5782931 | 118.60741   | 150.4783886 | 160.8720511 | -0.079939472 | 0.133786762  | 0.107794811 |
| <b>B7L9X5</b> | TY-2482_chromosome | - | 1334575 | 1335360 | 78.31379963 | 87.10939976 | 81.93026558 | 188.2698914 | 243.7418869 | 215.4029924 | -1.407903901 | 13.13923941  | 12.57895156 |
| <b>E11695</b> | TY-2482_chromosome | + | 1335391 | 1335594 | 141.8363313 | 159.2508077 | 153.6875372 | 244.6427716 | 266.2149527 | 312.0162914 | -0.866847667 | 7.013896731  | 6.589317742 |
| <b>B7L9X6</b> | TY-2482_chromosome | - | 1335586 | 1335855 | 203.0473332 | 199.9459686 | 191.2737225 | 215.5980312 | 212.8593253 | 287.0990258 | -0.264225495 | 1.018939589  | 0.881049936 |
| <b>B7L9X7</b> | TY-2482_chromosome | + | 1335976 | 1336797 | 59.33465329 | 75.45692066 | 75.84337802 | 80.17983869 | 80.11723719 | 79.09385777 | -0.209496087 | 0.407213318  | 0.33794036  |



|               |                    |   |         |         |             |             |             |             |             |             |              |              |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| <b>B7L9X8</b> | TY-2482_chromosome | + | 1336839 | 1337354 | 634.6162828 | 757.4357018 | 718.2866054 | 494.1885645 | 505.1550619 | 517.5718117 | 0.447070172  | 4.434979907  | 4.097677214 |
| <b>B7L9X9</b> | TY-2482_chromosome | - | 1337442 | 1338473 | 18.14292999 | 11.5112998  | 25.21906591 | 43.46173275 | 48.80451024 | 48.93273652 | -1.222365387 | 4.855938327  | 4.499098275 |
| <b>B7L9Y0</b> | TY-2482_chromosome | - | 1338492 | 1340969 | 80.30715045 | 97.48688094 | 94.65888831 | 137.4936769 | 175.4749036 | 171.1056811 | -0.849383696 | 4.97074782   | 4.609732783 |
| <b>P33342</b> | TY-2482_chromosome | - | 1340988 | 1341692 | 22.01532841 | 28.41328516 | 35.30072932 | 43.58168252 | 42.84404463 | 51.60784461 | -0.669110449 | 1.788503159  | 1.588952553 |
| <b>B7L9Y3</b> | TY-2482_chromosome | - | 1341743 | 1342282 | 125.8921831 | 169.8623495 | 135.2906008 | 385.402731  | 402.6588422 | 441.9462604 | -1.585716858 | 21.79322935  | 21.12026064 |
| <b>B7L9Y4</b> | TY-2482_chromosome | - | 1342578 | 1342856 | 119.1716795 | 124.166458  | 143.2298103 | 192.2627877 | 243.9197678 | 276.2575766 | -0.849432706 | 6.156531352  | 5.751223051 |
| <b>B7L9Y5</b> | TY-2482_chromosome | - | 1343122 | 1344228 | 11177.26302 | 10059.28152 | 11168.99971 | 10776.69367 | 10218.12622 | 10405.4925  | 0.075676536  | 0.050335788  | 0.039679341 |
| <b>B7L9Y6</b> | TY-2482_chromosome | + | 1344360 | 1346390 | 3441.953728 | 3118.283473 | 3034.673613 | 7992.835932 | 7730.538556 | 7089.421774 | -1.247223107 | 4.461245601  | 4.122996113 |
| <b>D3GZY0</b> | TY-2482_chromosome | + | 1346534 | 1350325 | 236.5542248 | 197.6947431 | 198.5851723 | 60.64167979 | 72.77063283 | 61.37940902 | 1.717549248  | 22.18883841  | 21.50843155 |
| <b>C8U658</b> | TY-2482_chromosome | + | 1350332 | 1353967 | 317.9684949 | 279.8866077 | 273.2979318 | 0.149245446 | 1.277194028 | 6.817426767 | 6.809223993  | 118.3054286  | 116.9819023 |
| <b>C8U663</b> | TY-2482_chromosome | + | 1356687 | 1358963 | 118.2090913 | 81.59422509 | 121.6739286 | 3.069711653 | 0           | 3.64211425  | 5.715918878  | 51.83247222  | 50.87849062 |
| <b>C8TU47</b> | TY-2482_chromosome | + | 1360092 | 1362089 | 189.3466685 | 244.09109   | 214.113928  | 0.00922605  | 0.045600164 | 4.766053317 | 7.139631227  | 89.69900588  | 88.50452199 |
| <b>D3GZY8</b> | TY-2482_chromosome | + | 1362205 | 1362675 | 79.82699769 | 71.36038429 | 91.50937926 | 107.6407002 | 90.37573971 | 107.0473961 | -0.278489424 | 0.942053911  | 0.811511296 |
| <b>D6IBS4</b> | TY-2482_chromosome | - | 1362722 | 1363246 | 1187.000286 | 1346.938421 | 1265.794775 | 1943.502259 | 1867.212659 | 1772.891998 | -0.590050806 | 6.550630856  | 6.138812749 |
| <b>B7L9Z1</b> | TY-2482_chromosome | - | 1363239 | 1363955 | 808.5010218 | 957.5212143 | 907.9484397 | 1052.299728 | 939.1673003 | 952.7638791 | -0.171844701 | 0.736594687  | 0.626591817 |
| <b>B7L9Z2</b> | TY-2482_chromosome | - | 1363955 | 1365637 | 1228.655675 | 1264.338998 | 1119.600268 | 2363.027934 | 1930.27057  | 1769.350217 | -0.783034034 | 9.17073604   | 8.685447648 |
| <b>B7L9Z3</b> | TY-2482_chromosome | + | 1365859 | 1366587 | 426.0826915 | 508.9213804 | 385.6558688 | 137.8558345 | 158.9079445 | 127.3930083 | 1.558858816  | 27.13032448  | 26.39061378 |
| <b>D7YJB0</b> | TY-2482_chromosome | - | 1366590 | 1366778 | 308.3677748 | 312.9007548 | 244.9685977 | 413.7600477 | 532.844965  | 560.5107684 | -0.835981623 | 7.442479079  | 7.003320346 |
| <b>B7L9Z5</b> | TY-2482_chromosome | - | 1366741 | 1367469 | 564.2223697 | 629.2565489 | 546.2702233 | 606.2323321 | 750.5470193 | 789.7122859 | -0.335238052 | 1.971853919  | 1.75915882  |
| <b>B7L9Z6</b> | TY-2482_chromosome | - | 1367477 | 1368400 | 533.7649603 | 695.9739068 | 529.2112399 | 165.0760086 | 154.2595205 | 151.6881026 | 1.81011207   | 39.76032038  | 38.89519292 |
| <b>B7L9Z7</b> | TY-2482_chromosome | - | 1368396 | 1369550 | 739.6062193 | 729.0361733 | 757.0908086 | 223.8539452 | 204.9252247 | 166.6230852 | 1.900816277  | 51.5741357   | 50.62171632 |
| <b>B7L9Z8</b> | TY-2482_chromosome | - | 1369560 | 1370474 | 79.9088212  | 945.2046942 | 1032.613312 | 312.8263052 | 291.4604645 | 231.4632086 | 1.772963308  | 46.20680592  | 45.29242864 |
| <b>B7L9Z9</b> | TY-2482_chromosome | - | 1370688 | 1372982 | 2870.283498 | 2740.751943 | 2860.499728 | 2688.465128 | 2621.333511 | 2464.534318 | 0.134085258  | 0.349475782  | 0.289290927 |
| <b>B7LA00</b> | TY-2482_chromosome | + | 1373178 | 1374890 | 6098.513741 | 5980.285257 | 6674.729532 | 5888.515442 | 5363.659528 | 5232.362918 | 0.205477662  | 0.269621951  | 0.222043354 |
| <b>B7LA01</b> | TY-2482_chromosome | - | 1374934 | 1375863 | 1573.578951 | 1616.9986   | 1660.757061 | 1874.067463 | 1819.445748 | 1712.726183 | -0.157346492 | 0.826746576  | 0.707454842 |
| <b>B5YW61</b> | TY-2482_chromosome | - | 1376040 | 1376648 | 287.6054631 | 293.0386372 | 267.5132567 | 61.44960042 | 57.97247215 | 50.55425422 | 2.291599287  | 44.35508888  | 43.45657486 |
| <b>D3H001</b> | TY-2482_chromosome | + | 1376758 | 1377369 | 816.9994791 | 719.421394  | 727.2067778 | 531.3885764 | 527.7117388 | 550.2728102 | 0.509550134  | 5.264987867  | 4.892023663 |
| <b>B7LA04</b> | TY-2482_chromosome | - | 1377505 | 1378263 | 490.6092682 | 437.1970634 | 482.6549465 | 218.561297  | 177.6937835 | 193.217916  | 1.285046331  | 21.22018518  | 20.55412631 |
| <b>B7LA05</b> | TY-2482_chromosome | - | 1378319 | 1379404 | 45.74704672 | 52.86701093 | 46.11693651 | 39.54299903 | 42.80735799 | 33.96904171 | 0.269016533  | 0.606328416  | 0.5118996   |
| <b>C6V2L9</b> | TY-2482_chromosome | + | 1380069 | 1380398 | 333.484371  | 364.4103522 | 340.6084881 | 172.6284827 | 192.7583124 | 160.6106386 | 0.954554726  | 11.77667643  | 11.23887038 |
| <b>B7LA06</b> | TY-2482_chromosome | - | 1380435 | 1381379 | 319.2635707 | 428.6156367 | 318.0217159 | 861.4065188 | 848.2585052 | 890.5089538 | -1.380394605 | 23.39814939  | 22.7024728  |
| <b>B7LA07</b> | TY-2482_chromosome | + | 1381618 | 1382013 | 2376.533445 | 2314.423288 | 2669.022643 | 861.9926356 | 935.9760971 | 1258.339812 | 1.311944217  | 21.91705811  | 21.24203599 |
| <b>B7LA08</b> | TY-2482_chromosome | + | 1382013 | 1382705 | 3985.518242 | 3820.023447 | 4361.5547   | 1676.101435 | 1774.302468 | 2015.740503 | 1.190829395  | 9.551364587  | 9.057752522 |
| <b>B7LA09</b> | TY-2482_chromosome | + | 1382838 | 1383719 | 2827.144923 | 3105.59406  | 3342.881753 | 13650.8193  | 11329.10375 | 13116.47791 | -2.034172462 | 9.085714851  | 8.602548856 |
| <b>B7LA10</b> | TY-2482_chromosome | + | 1383872 | 1384588 | 295.2044273 | 224.4567572 | 282.8329824 | 1398.426753 | 1407.286487 | 1721.32097  | -2.420510905 | 81.82827263  | 80.67032752 |
| <b>B7LAG5</b> | TY-2482_chromosome | + | 1384594 | 1384830 | 163.9187027 | 160.5182467 | 146.8608568 | 512.6738601 | 557.7392078 | 680.0772938 | -1.89682323  | 35.47223709  | 34.64024985 |
| <b>B7LAG6</b> | TY-2482_chromosome | + | 1385152 | 1386387 | 167.8058821 | 191.4074259 | 175.3673221 | 1664.247095 | 1469.347985 | 1623.878794 | -3.185023096 | 133.4033045  | 131.9994962 |
| <b>B7LAG7</b> | TY-2482_chromosome | + | 1386413 | 1387616 | 213.7628881 | 162.1016973 | 189.6909518 | 801.4231419 | 766.9156169 | 760.8422045 | -1.988791184 | 50.35789381  | 49.41928708 |
| <b>B7LAG8</b> | TY-2482_chromosome | - | 1387693 | 1388700 | 1192.921858 | 1135.307258 | 1186.711403 | 602.9807436 | 568.5279136 | 432.9545514 | 1.133879524  | 21.76343352  | 21.09087433 |
| <b>B7LAG9</b> | TY-2482_chromosome | - | 1388719 | 1390236 | 567.1775077 | 591.7557377 | 517.6144618 | 263.2312406 | 228.3895299 | 221.4581143 | 1.197082884  | 21.74457536  | 21.07283405 |
| <b>B7LAH0</b> | TY-2482_chromosome | - | 1390300 | 1391295 | 955.5830125 | 975.7951566 | 872.4613813 | 808.9242851 | 853.9630319 | 590.2569739 | 0.280678557  | 1.928254802  | 1.719376147 |
| <b>B7LAH1</b> | TY-2482_chromosome | - | 1391578 | 1392615 | 113.5279085 | 72.35374879 | 68.33780083 | 168.1454015 | 153.9580222 | 138.9127106 | -0.823934001 | 4.500045883  | 4.159896591 |
| <b>B7LAH2</b> | TY-2482_chromosome | + | 1392605 | 1392805 | 45.8613353  | 49.91039789 | 51.57680057 | 89.73946374 | 100.9675177 | 78.01763095 | -0.876614167 | 3.850466197  | 3.53993728  |
| <b>B7LAH3</b> | TY-2482_chromosome | - | 1392760 | 1393914 | 713.3001095 | 683.9286425 | 663.9732157 | 1144.356509 | 1179.682576 | 1110.670272 | -0.738841681 | 11.88454903  | 11.34584165 |
| <b>B7LAH4</b> | TY-2482_chromosome | - | 1393934 | 1394599 | 2996.245253 | 2361.820605 | 2633.624761 | 3108.829634 | 3150.531853 | 2991.793519 | -0.166755078 | 0.618008481  | 0.521250688 |
| <b>B7LAH6</b> | TY-2482_chromosome | + | 1394857 | 1395690 | 1550.088463 | 1316.072144 | 1465.428997 | 1458.277721 | 1389.635453 | 1360.194682 | 0.076947402  | 0.182893887  | 0.147848945 |
| <b>B7LAH7</b> | TY-2482_chromosome | - | 1395728 | 1397716 | 464.2752963 | 462.8727589 | 357.1235639 | 241.8598246 | 234.8905246 | 283.3484851 | 0.715440438  | 7.009106639  | 6.584758843 |
| <b>B7LAH9</b> | TY-2482_chromosome | - | 1398012 | 1399478 | 1867.57805  | 1931.884277 | 1811.911877 | 2383.187207 | 2491.753948 | 2431.687379 | -0.396726279 | 3.314641839  | 3.026807048 |
| <b>D7JFX3</b> | TY-2482_chromosome | - | 1399465 | 1399644 | 229.6922965 | 226.3617456 | 282.3835307 | 350.1795991 | 312.0973079 | 346.3465027 | -0.407390241 | 2.723876414  | 2.466196099 |
| <b>B7LAI0</b> | TY-2482_chromosome | - | 1399686 | 1400564 | 2051.465584 | 2154.954845 | 2150.743442 | 2423.301798 | 2180.791553 | 2230.376544 | -0.112962398 | 0.466356438  | 0.388660456 |
| <b>B7LAI1</b> | TY-2482_chromosome | + | 1400663 | 1401709 | 424.1977424 | 402.4100291 | 432.3483469 | 658.0051323 | 724.0935143 | 693.768178  | -0.701451466 | 9.2128791473 | 8.872791473 |
| <b>B7LAI2</b> | TY-2482_chromosome | + | 1401786 | 1402640 | 1110.060895 | 1031.141043 | 1142.017442 | 1213.802395 | 1260.314597 | 1161.238229 | -0.121774493 | 0.798615173  | 0.682403959 |
| <b>B7LAI3</b> | TY-2482_chromosome | + | 1402647 | 1403732 | 1041.687523 | 990.3879632 | 1005.782901 | 1060.647632 | 1089.105664 | 994.9840253 | -0.043932643 | 0.194845744  | 0.157531459 |
| <b>B7LAI4</b> | TY-2482_chromosome | - | 1403794 | 1405041 | 182.2692243 | 224.8074311 | 161.564814  | 191.3346444 | 208.9122949 | 226.9722819 | -0.223841444 | 0.475830271  | 0.396544615 |
| <b>B7LAI5</b> | TY-2482_chromosome | - | 1405144 | 1406082 | 18.3544773  | 18.9513379  | 25.42172953 | 41.93216968 | 51.91648686 | 40.51192449 | -1.06290166  | 3.390091641  | 3.099037957 |

|        |                    |   |         |         |              |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B5YWV4 | TY-2482_chromosome | + | 1406212 | 1406907 | 52.64634457  | 60.89696983 | 65.74835218 | 54.63093648 | 46.4550259  | 40.29074738 | 0.330741662  | 0.822585404 | 0.703637031 |
| B7LAI7 | TY-2482_chromosome | - | 1406981 | 1408228 | 115.9690912  | 144.7005634 | 123.7015746 | 93.35032622 | 106.4855568 | 122.2624549 | 0.20842469   | 0.698484195 | 0.59316319  |
| B7LAI8 | TY-2482_chromosome | - | 1408325 | 1409260 | 63.16917474  | 57.34958082 | 59.0026838  | 45.22496207 | 44.01102787 | 31.76486741 | 0.56965906   | 1.745313407 | 1.548235072 |
| B7LAJ0 | TY-2482_chromosome | - | 1410616 | 1412304 | 14008.65998  | 19626.15274 | 18728.86588 | 1749.544113 | 1644.159108 | 1415.362767 | 3.389958732  | 20.32520778 | 19.67147296 |
| B7LAJ1 | TY-2482_chromosome | - | 1412324 | 1413259 | 14756.31629  | 21074.85975 | 19320.91586 | 639.6043844 | 540.3338242 | 459.3759722 | 5.00235548   | 36.4076586  | 35.56671652 |
| B7LAJ2 | TY-2482_chromosome | - | 1413262 | 1414389 | 26895.2398   | 31473.58957 | 30396.79435 | 1051.211186 | 1043.648096 | 805.5243867 | 4.901411376  | 32.7193974  | 31.90608384 |
| B7LAJ3 | TY-2482_chromosome | + | 1414757 | 1415935 | 261.5077157  | 255.5218254 | 243.0307031 | 653.8211717 | 641.6595759 | 594.4203611 | -1.324325018 | 24.22908307 | 23.52291998 |
| D7YNX5 | TY-2482_chromosome | + | 1416089 | 1416913 | 1583.2616    | 1611.435381 | 1639.256017 | 1162.277751 | 1161.811138 | 1181.829404 | 0.465187455  | 5.605655599 | 5.219769972 |
| B7LAJ6 | TY-2482_chromosome | + | 1417139 | 1418602 | 2785.805712  | 2570.511935 | 2907.690543 | 2488.367843 | 2306.122274 | 2583.95029  | 0.1973267    | 0.494730191 | 0.412510809 |
| B7LAJ7 | TY-2482_chromosome | + | 1418723 | 1419706 | 752.7236635  | 673.1649808 | 871.4337765 | 998.9690191 | 982.3853994 | 911.6314435 | -0.276459344 | 2.39239604  | 2.153061326 |
| B7LAJ8 | TY-2482_chromosome | + | 1419748 | 1420458 | 845.3938602  | 908.8460955 | 843.5227996 | 1409.816223 | 1723.569201 | 1564.791286 | -0.875269529 | 14.99482421 | 14.40308049 |
| B7LAJ9 | TY-2482_chromosome | + | 1420873 | 1421436 | 3064.883062  | 2708.495838 | 2777.368797 | 10896.61907 | 10265.693   | 9692.490234 | -1.836622654 | 8.147002771 | 7.682726082 |
| B7LAK0 | TY-2482_chromosome | + | 1421620 | 1423173 | 1091.591151  | 1005.532373 | 898.491935  | 1346.834412 | 1307.412186 | 1293.061126 | -0.410173691 | 3.845813175 | 3.535817462 |
| B7LAK1 | TY-2482_chromosome | + | 1423258 | 1425069 | 1396.562946  | 1488.403675 | 1512.747522 | 1148.816298 | 1124.424433 | 1140.799154 | 0.361044344  | 3.639396744 | 3.337495895 |
| B7LAK2 | TY-2482_chromosome | + | 1425073 | 1426164 | 626.3527418  | 468.3326456 | 536.021841  | 791.6992975 | 807.0714709 | 749.654225  | -0.473520313 | 4.823527337 | 4.46925183  |
| B7LAK3 | TY-2482_chromosome | + | 1426167 | 1427189 | 582.0067323  | 453.1500651 | 404.5162529 | 862.4132624 | 849.29558   | 816.0162181 | -0.803292781 | 9.799316748 | 9.2980469   |
| B7LAK4 | TY-2482_chromosome | + | 1427194 | 1428780 | 11281.908991 | 1162.8589   | 1139.598517 | 2158.283676 | 2172.311603 | 2148.528933 | -0.846834904 | 14.29856478 | 13.720535   |
| B7LAK5 | TY-2482_chromosome | - | 1428790 | 1429131 | 1149.353263  | 1231.359413 | 1159.563096 | 1618.313431 | 1380.881341 | 1421.393554 | -0.344048416 | 2.747980796 | 2.488564879 |
| B7LAK6 | TY-2482_chromosome | - | 1429467 | 1430654 | 1142.436711  | 1058.212065 | 1120.626115 | 2338.212641 | 2433.092391 | 2280.040948 | -1.068200555 | 22.06550582 | 21.38842055 |
| B7LAK7 | TY-2482_chromosome | - | 1430685 | 1431377 | 1285.259897  | 1200.884034 | 1153.978771 | 1741.702975 | 1820.530549 | 1663.493971 | -0.523178472 | 5.950741507 | 5.555230639 |
| B7LAK8 | TY-2482_chromosome | + | 1431526 | 1433283 | 1340.469678  | 1239.954915 | 1191.351557 | 1303.969526 | 1334.047802 | 1274.611551 | -0.052319983 | 0.218225148 | 0.177675525 |
| Q1R9N3 | TY-2482_chromosome | - | 1433399 | 1433827 | 14083.03719  | 12695.87622 | 12382.04329 | 1170.82799  | 14808.18034 | 16637.37877 | -0.122653144 | 0.16596623  | 0.133835081 |
| B7LAL0 | TY-2482_chromosome | - | 1433837 | 1434841 | 1261.291624  | 1181.242355 | 1325.855642 | 1522.450197 | 1613.147722 | 1556.478798 | -0.287069589 | 2.637416096 | 2.383966719 |
| B7LAL1 | TY-2482_chromosome | + | 1435023 | 1435247 | 707.1674017  | 701.4221375 | 739.7867308 | 1375.850011 | 1570.685008 | 1675.392527 | -1.087964867 | 23.63226064 | 22.9331166  |
| B7LAL2 | TY-2482_chromosome | + | 1435270 | 1437027 | 1787.061469  | 1498.152197 | 1517.491166 | 4030.504824 | 4197.156182 | 3897.329038 | -1.31497317  | 14.16736636 | 13.59097977 |
| proL   | TY-2482_chromosome | + | 1437105 | 1437181 | 30.57102475  | 24.88556566 | 27.38455943 | 53.50266387 | 80.93141257 | 51.16688243 | -1.137447436 | 4.353106134 | 4.020319542 |
| B5YWY3 | TY-2482_chromosome | - | 1437287 | 1439875 | 522.3985917  | 623.5950248 | 574.7074609 | 481.076737  | 458.6056126 | 524.8008472 | 0.199497504  | 1.21987187  | 1.065789404 |
| B7LAL6 | TY-2482_chromosome | + | 1440195 | 1440839 | 427.6319215  | 301.5860727 | 325.1168881 | 329.5648499 | 287.6551649 | 265.9434572 | 0.299547855  | 1.137291722 | 0.989490102 |
| B7LAL7 | TY-2482_chromosome | - | 1440880 | 1441929 | 964.8071583  | 783.7194906 | 890.7544225 | 1257.827303 | 1231.920611 | 1208.796967 | -0.442693132 | 5.111702059 | 4.744854779 |
| Q0TFP6 | TY-2482_chromosome | - | 1441856 | 1442483 | 512.5398684  | 394.5620977 | 419.8231556 | 742.8787605 | 758.267401  | 746.6740104 | -0.720720599 | 9.270678077 | 8.782722202 |
| B7LAL9 | TY-2482_chromosome | - | 1442483 | 1444423 | 758.5561693  | 705.9983884 | 656.9739192 | 1869.163413 | 1813.459152 | 1794.418572 | -1.374520556 | 38.07410989 | 37.21906809 |
| B7LAM0 | TY-2482_chromosome | - | 1444423 | 1444899 | 252.13339    | 213.534097  | 302.3512765 | 1337.321372 | 1388.533308 | 1383.930934 | -2.340576338 | 82.04456509 | 80.88536661 |
| B7LAM1 | TY-2482_chromosome | - | 1444899 | 1445105 | 160.4517111  | 101.2716611 | 174.5234346 | 797.4714487 | 825.8503644 | 815.7744704 | -2.354023874 | 57.02984771 | 56.0459029  |
| B7LAM2 | TY-2482_chromosome | - | 1445105 | 1445839 | 611.0507331  | 559.3068966 | 627.6569723 | 2231.917831 | 2071.679598 | 2202.526675 | -1.82469813  | 64.9081971  | 63.8533752  |
| B7LAM3 | TY-2482_chromosome | - | 1445884 | 1446543 | 480.7794708  | 450.9997965 | 438.4356638 | 1814.939601 | 1734.247362 | 1738.274548 | -1.947283179 | 72.7234168  | 71.61985965 |
| B7LAM4 | TY-2482_chromosome | - | 1446543 | 1447163 | 1111.759635  | 1084.764426 | 1126.347467 | 3832.522765 | 3714.467766 | 4088.044982 | -1.795551313 | 25.80018755 | 25.07688497 |
| B7LAM5 | TY-2482_chromosome | - | 1447179 | 1447778 | 1379.878271  | 1361.525156 | 1349.179558 | 5735.951146 | 5714.156327 | 5796.689947 | -2.075792057 | 25.0898616  | 24.37159039 |
| B7LAM7 | TY-2482_chromosome | - | 1448237 | 1449097 | 1433.764484  | 1600.974226 | 1368.142343 | 4663.370588 | 4591.204893 | 4757.672053 | -1.7132404   | 17.65808051 | 17.03205583 |
| B7LAM8 | TY-2482_chromosome | - | 1449087 | 1449779 | 2270.281722  | 2101.79193  | 2113.5821   | 4906.667905 | 4581.884052 | 4683.375391 | -1.119227373 | 8.302856673 | 7.83909938  |
| B7LAM9 | TY-2482_chromosome | - | 1449789 | 1452272 | 15749.40887  | 14519.44178 | 15757.95195 | 30202.782   | 25996.19212 | 24933.33857 | -0.799620655 | 1.663000745 | 1.4712312   |
| B7LAN0 | TY-2482_chromosome | - | 1452272 | 1452532 | 2140.024505  | 1756.209657 | 2040.037492 | 3460.605741 | 2509.615289 | 2664.181387 | -0.500166558 | 2.608688697 | 2.356329534 |
| B7LAN1 | TY-2482_chromosome | - | 1452525 | 1453016 | 5482.563225  | 3870.012162 | 4556.00031  | 7195.225603 | 5041.236503 | 4759.777598 | -0.236329891 | 0.455058148 | 0.379619051 |
| B7LAN3 | TY-2482_chromosome | + | 1453424 | 1453909 | 3613.313999  | 3688.974765 | 3729.713925 | 2444.751431 | 2309.071223 | 2620.421137 | 0.58381012   | 2.781641092 | 2.521275551 |
| B7LAN4 | TY-2482_chromosome | - | 1454064 | 1455707 | 2831.711651  | 2813.992782 | 3227.891374 | 867.4787577 | 816.5128788 | 765.1811322 | 1.880067185  | 58.58118673 | 57.5801415  |
| B7LAN5 | TY-2482_chromosome | - | 1455928 | 1457568 | 294.5349819  | 311.0316818 | 318.8195815 | 232.0615425 | 229.285838  | 247.9312232 | 0.382618425  | 2.338598226 | 2.102871378 |
| B7LAN6 | TY-2482_chromosome | - | 1457467 | 1458294 | 250.6055891  | 232.8932983 | 293.9420237 | 176.3035475 | 169.1551764 | 153.7515314 | 0.683707235  | 4.713855726 | 4.364080786 |
| B7LAN7 | TY-2482_chromosome | - | 1458297 | 1459358 | 699.940096   | 567.3404233 | 659.3735926 | 516.6437513 | 458.0447751 | 424.8049097 | 0.503898309  | 3.974730234 | 3.657931748 |
| B7LAN8 | TY-2482_chromosome | - | 1459435 | 1460487 | 333.29489    | 377.6506077 | 300.805235  | 644.6005734 | 781.6064478 | 684.3743764 | -1.118168489 | 15.98461576 | 15.37906182 |
| B7LAN9 | TY-2482_chromosome | - | 1460602 | 1461702 | 93070.89547  | 104650.2668 | 104540.6397 | 40210.28417 | 37262.7883  | 37560.166   | 1.378234506  | 3.606790228 | 3.305806354 |
| D6JCB6 | TY-2482_chromosome | + | 1461983 | 1462207 | 30.91132428  | 35.65499788 | 27.61217186 | 18.5615232  | 30.70009705 | 24.83716427 | 0.291672902  | 0.529951933 | 0.443108379 |
| B7LAP0 | TY-2482_chromosome | + | 1462441 | 1465110 | 4941.388482  | 5331.624198 | 5179.419407 | 5503.889101 | 5251.194825 | 5406.254584 | 0.0879523632 | 0.082784062 | 0.065841191 |
| B7LAP1 | TY-2482_chromosome | + | 1465130 | 1465777 | 5085.951569  | 5041.059333 | 5568.465636 | 5573.751782 | 5317.942734 | 5402.053779 | -0.034699939 | 0.067937389 | 0.053340112 |
| B7LAP2 | TY-2482_chromosome | - | 1465983 | 1468781 | 2369.629468  | 2257.220545 | 2321.780721 | 3086.260768 | 3051.499088 | 2828.667923 | -0.360168981 | 1.604669105 | 1.417609229 |
| B7LAP3 | TY-2482_chromosome | - | 1469107 | 1469880 | 59.10559323  | 42.60095798 | 42.12934694 | 82.34821781 | 90.5026637  | 102.7964962 | -0.90137578  | 4.266614637 | 3.938482907 |
| B7LAP4 | TY-2482_chromosome | - | 1469888 | 1471534 | 89.99050878  | 112.2192419 | 99.1805821  | 231.9449536 | 226.5431848 | 220.7914413 | -1.220963582 | 11.05282469 | 10.52599126 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7LAP5 | TY-2482_chromosome | - | 1471538 | 1476154 | 504.5080279 | 667.3343502 | 491.9275564 | 622.4885095 | 660.8975827 | 681.5769495 | -0.332814578 | 1.362140402 | 1.195727775  |
| B7LAP6 | TY-2482_chromosome | - | 1476076 | 1476696 | 20.93264212 | 18.16833633 | 18.78136229 | 37.1819389  | 35.59201959 | 45.75747025 | -1.01538046  | 2.858196692 | 2.594473413  |
| B7LAP7 | TY-2482_chromosome | - | 1476696 | 1478381 | 192.4054198 | 157.9084776 | 145.6755186 | 152.4760771 | 140.9189654 | 130.7448395 | 0.228832036  | 0.731169911 | 0.622286357  |
| B7LAP8 | TY-2482_chromosome | - | 1478533 | 1481157 | 20164.91082 | 17031.4441  | 17861.60568 | 12491.43164 | 12711.22178 | 10630.42334 | 0.641701558  | 1.135744609 | 0.988187455  |
| B7LAP9 | TY-2482_chromosome | + | 1481304 | 1482023 | 836.7010615 | 742.475485  | 797.3935594 | 1109.672917 | 1133.070136 | 1072.923222 | -0.455637296 | 5.230375889 | 4.858846692  |
| B7LAQ0 | TY-2482_chromosome | - | 1482157 | 1485888 | 413.0149755 | 481.9888674 | 372.6971345 | 356.6911113 | 375.4501175 | 403.1938384 | 0.094676865  | 0.554074664 | 0.464860637  |
| B3HLS5 | TY-2482_chromosome | - | 1486316 | 1486585 | 178.8898261 | 183.0770045 | 179.6437378 | 589.2307757 | 803.3834269 | 789.131979  | -2.008146327 | 40.74606274 | 39.87386297  |
| B7LAQ1 | TY-2482_chromosome | + | 1486584 | 1488866 | 5577.705929 | 4996.934043 | 5080.451717 | 11078.71726 | 13573.05493 | 11811.35882 | -1.203138429 | 3.698284936 | 3.393585562  |
| B7LAQ2 | TY-2482_chromosome | + | 1488958 | 1490085 | 4232.057512 | 3693.523048 | 4149.154067 | 2664.436859 | 2738.279275 | 2392.525301 | 0.663737131  | 2.970185878 | 2.699937016  |
| B7LAQ3 | TY-2482_chromosome | + | 1490088 | 1490339 | 802.6045516 | 688.6507214 | 797.2018174 | 550.4455829 | 568.1566704 | 572.3065462 | 0.480639274  | 4.329180404 | 3.998664373  |
| B7LAQ4 | TY-2482_chromosome | - | 1490399 | 1491046 | 638.6620422 | 699.8308618 | 543.7602647 | 675.1949838 | 620.5151123 | 703.7728848 | -0.144470363 | 0.388255683 | 0.321018802  |
| P0CE57 | TY-2482_chromosome | - | 1491303 | 1492283 | 461.6556862 | 516.6790623 | 412.8933417 | 0.083478057 | 1.896227704 | 1.431082213 | 8.54820034   | 159.7343791 | 158.2236253  |
| B5YX24 | TY-2482_chromosome | + | 1492425 | 1492664 | 27.10106981 | 19.78382441 | 21.74226468 | 308.363566  | 275.0929064 | 474.5184537 | -3.888422778 | 50.60988159 | 49.66748187  |
| B7LAQ7 | TY-2482_chromosome | - | 1492712 | 1493785 | 1051.727649 | 1029.765021 | 1107.54251  | 19639.84593 | 17129.9946  | 2789.62851  | -4.310559645 | 27.43718582 | 26.69507967  |
| B7LAQ8 | TY-2482_chromosome | - | 1493793 | 1495148 | 962.3197871 | 925.0144576 | 1024.145049 | 19076.06987 | 15480.61704 | 27760.0973  | -4.379620852 | 27.72898731 | 26.98302074  |
| A7ZP61 | TY-2482_chromosome | + | 1495199 | 1495393 | 21.08877476 | 24.59739875 | 17.5884737  | 191.2632175 | 118.6997561 | 248.7652661 | -3.193611558 | 24.57329157 | 23.86089235  |
| B7LAQ9 | TY-2482_chromosome | + | 1495421 | 1497046 | 1089.813835 | 914.7972547 | 928.4218024 | 14813.3721  | 12085.36975 | 23796.24737 | -4.06784749  | 24.79106762 | 24.07641933  |
| B7LAR0 | TY-2482_chromosome | + | 1497039 | 1498295 | 208.4857611 | 217.8317604 | 238.1812997 | 20323.79205 | 17398.8817  | 29048.02973 | -6.623357491 | 49.90766668 | 48.97356824  |
| B7LAR1 | TY-2482_chromosome | + | 1498295 | 1499482 | 162.0757214 | 150.3448475 | 138.3054292 | 20133.4469  | 17190.20573 | 25032.79398 | -7.108761975 | 56.95221375 | 55.96994252  |
| B7LAR2 | TY-2482_chromosome | + | 1499679 | 1500578 | 148.3090438 | 173.693792  | 152.4600053 | 1502.772009 | 1873.304641 | 2417.71294  | -3.635755457 | 108.7320719 | 107.4603086  |
| A7ZP66 | TY-2482_chromosome | - | 1500625 | 1501134 | 195.938698  | 177.5971304 | 152.8924094 | 397.6774752 | 476.4584068 | 503.7601287 | -1.395478877 | 19.29826392 | 18.65536768  |
| B7LAR4 | TY-2482_chromosome | - | 1501150 | 1502349 | 1785.143638 | 1394.321719 | 1457.175546 | 1658.339526 | 1477.019963 | 1556.940736 | 0.106990124  | 0.040387301 | 0.031776689  |
| B7LAR5 | TY-2482_chromosome | - | 1502452 | 1502991 | 201.157234  | 184.6513059 | 179.8391476 | 127.6847938 | 119.1880359 | 133.2944915 | 0.578589949  | 3.480929297 | 3.185088066  |
| B7LAR6 | TY-2482_chromosome | + | 1503270 | 1503692 | 556.4133965 | 656.5190121 | 586.3225071 | 532.8418655 | 550.9169485 | 564.555903  | 0.086612513  | 0.501914823 | 0.419274715  |
| Q31YK5 | TY-2482_chromosome | - | 1503737 | 1504357 | 221.1362709 | 250.2419078 | 200.1986845 | 195.9807904 | 253.4518838 | 258.8095969 | -0.125376494 | 0.236262139 | 0.193510159  |
| B7LAR8 | TY-2482_chromosome | + | 1504644 | 1505780 | 454.3154169 | 361.250784  | 400.9546144 | 549.5941805 | 680.1649538 | 581.6514023 | -0.530774684 | 4.940224472 | 4.580406389  |
| B7LAR9 | TY-2482_chromosome | + | 1505787 | 1506752 | 363.2771181 | 298.4914141 | 307.7363534 | 244.4050421 | 260.8078554 | 244.753682  | 0.396618225  | 2.240214266 | 2.011172432  |
| B7LAS0 | TY-2482_chromosome | + | 1506755 | 1508734 | 1199.229274 | 1113.061608 | 1132.251905 | 355.8280085 | 361.2556595 | 298.965559  | 1.766410955  | 59.52221983 | 58.51236508  |
| B7LAS1 | TY-2482_chromosome | + | 1508734 | 1509621 | 461.2772908 | 429.17402   | 424.0310639 | 132.7785351 | 116.9439631 | 105.7212964 | 1.884463439  | 41.81988958 | 40.94181646  |
| B7LAS2 | TY-2482_chromosome | + | 1509624 | 1511273 | 575.7262923 | 651.6713695 | 580.6472933 | 238.0727166 | 246.8035465 | 198.0893013 | 1.360633155  | 27.01587255 | 26.27901907  |
| D6I9J9 | TY-2482_chromosome | + | 1511326 | 1511991 | 716.0464523 | 889.8867875 | 837.4977414 | 826.1337005 | 708.2010672 | 751.6750413 | 0.056501625  | 0.360647127 | 0.298280762  |
| B7LAS5 | TY-2482_chromosome | - | 1511991 | 1512254 | 803.4478736 | 992.3050464 | 793.5021622 | 877.1930849 | 839.8895137 | 848.3906402 | -0.05791223  | 0           | 0            |
| B7LAS6 | TY-2482_chromosome | - | 1512367 | 1513719 | 2088.602569 | 2018.663025 | 2146.35881  | 1165.865284 | 1077.308868 | 1087.249078 | 0.922160626  | 16.874134   | 16.25900356  |
| B7LAS7 | TY-2482_chromosome | - | 1513719 | 1514678 | 3791.835632 | 3295.204854 | 4076.976619 | 2207.461013 | 2018.115053 | 1973.331313 | 0.899530201  | 5.607992166 | 5.22147145   |
| B7LAS8 | TY-2482_chromosome | - | 1514681 | 1515535 | 4490.8129   | 4120.912578 | 4755.262156 | 2428.130788 | 2303.288457 | 2080.819266 | 1.003422065  | 6.262956763 | 5.858044741  |
| B7LAS9 | TY-2482_chromosome | - | 1515553 | 1516308 | 1269.937114 | 1409.637737 | 1410.72462  | 751.0982437 | 686.7796759 | 644.9720801 | 0.956883777  | 19.62290796 | 18.97617177  |
| B7LAT0 | TY-2482_chromosome | - | 1516308 | 1517975 | 2208.857818 | 2015.795151 | 2368.801409 | 3128.58463  | 2319.061387 | 2053.999566 | -0.159930756 | 0.509443228 | 0.425594167  |
| B7LAT1 | TY-2482_chromosome | - | 1518067 | 1519359 | 1648.429028 | 1754.633745 | 1741.2725   | 2439.233643 | 2568.361955 | 2279.381386 | -0.513709396 | 5.245161212 | 4.872812591  |
| B7LAT2 | TY-2482_chromosome | - | 1519441 | 1519743 | 4731.227394 | 4512.499349 | 4591.849028 | 1182.680614 | 1131.72383  | 1039.058607 | 2.048760134  | 30.86659692 | 30.08530239  |
| B7LAT3 | TY-2482_chromosome | - | 1519801 | 1520259 | 484.822228  | 547.2898628 | 517.2430102 | 301.786018  | 280.7947822 | 300.2466739 | 0.786438813  | 10.34178584 | 9.829053413  |
| B7LAT4 | TY-2482_chromosome | + | 1520324 | 1521238 | 463.2247571 | 466.3656277 | 451.2629593 | 552.1272561 | 531.2222886 | 499.6034629 | -0.207736367 | 1.051252473 | 0.910845858  |
| B7LAT5 | TY-2482_chromosome | + | 1521429 | 1522647 | 15.84732653 | 12.46853983 | 11.74046389 | 27.00612245 | 52.08049663 | 34.58902385 | -1.49133178  | 4.354996534 | 4.021835389  |
| D7ZXR9 | TY-2482_chromosome | + | 1523092 | 1523319 | 7.91399156  | 6.398665305 | 5.906196954 | 10.9781963  | 22.65506446 | 34.03651129 | -1.711373845 | 3.623511056 | 3.32230703   |
| B7LAT6 | TY-2482_chromosome | + | 1523295 | 1523642 | 23.9770817  | 15.64689298 | 21.53644497 | 15.71239681 | 31.29217739 | 41.16779725 | -0.428026934 | 0.883559209 | 0.758156235  |
| B7LAT7 | TY-2482_chromosome | + | 1523771 | 1524271 | 45.66649778 | 59.25950756 | 39.33615253 | 73.45030305 | 88.35181001 | 90.59205727 | -0.899104093 | 3.271353173 | 2.985539144  |
| B7LAT8 | TY-2482_chromosome | - | 1524344 | 1525798 | 17587.55749 | 16002.66273 | 17075.51755 | 16763.1818  | 17577.42436 | 15295.23749 | 0.0048791641 | 0.030620876 | 0.024141314  |
| B7LAT9 | TY-2482_chromosome | - | 1525808 | 1527334 | 15905.83159 | 16538.00474 | 16536.73405 | 16284.22782 | 16503.66592 | 13672.58949 | 0.065423394  | 0.083365127 | 0.1585050794 |
| B7LAU0 | TY-2482_chromosome | - | 1527501 | 1529339 | 19660.95733 | 24194.06074 | 22155.81666 | 15148.10782 | 14455.81519 | 11946.94994 | 0.617606669  | 1.229784514 | 1.074832838  |
| B7LAU1 | TY-2482_chromosome | - | 1529339 | 1529638 | 3819.286824 | 5177.589328 | 5019.579145 | 2770.085705 | 2578.341854 | 2057.755014 | 0.86991594   | 5.075098954 | 4.710070077  |
| B7LAU2 | TY-2482_chromosome | - | 1529638 | 1530189 | 7430.63049  | 9954.096164 | 9100.12337  | 5728.362455 | 5789.330308 | 4817.136687 | 0.63878673   | 1.537568639 | 1.356753888  |
| B7LAU3 | TY-2482_chromosome | - | 1530204 | 1530743 | 7544.070235 | 8996.780556 | 8917.553521 | 5541.086712 | 5244.865655 | 4484.71793  | 0.708535902  | 1.713397021 | 1.518504507  |
| B7LAU4 | TY-2482_chromosome | - | 1530761 | 1531735 | 13801.38223 | 15221.04466 | 15783.65577 | 11483.9232  | 11464.87291 | 9840.930917 | 0.441264978  | 0.732156155 | 0.622940446  |
| B7LAU5 | TY-2482_chromosome | - | 1531735 | 1534464 | 47214.7637  | 47693.97046 | 50213.55787 | 44499.81315 | 44004.67868 | 39044.51347 | 0.190391151  | 0.212739092 | 0.17306602   |
| B7LAU6 | TY-2482_chromosome | - | 1534514 | 1535848 | 21080.70764 | 20650.6543  | 21354.07681 | 18746.04312 | 18412.06664 | 17640.68915 | 0.209762931  | 0.250392716 | 0.205234133  |
| B7LAU7 | TY-2482_chromosome | - | 1535848 | 1536345 | 8356.103705 | 8318.259896 | 8990.827122 | 8547.433337 | 8125.224804 | 7885.619605 | 0.076425582  | 0.074614612 | 0.058936327  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LAU8</b> | TY-2482_chromosome | - | 1536351 | 1538150 | 21232.32694 | 22921.02833 | 23618.20545 | 32719.92101 | 30303.7102  | 28464.54751 | -0.440212957 | 0.646168823 | 0.546027892 |
| <b>B7LBP8</b> | TY-2482_chromosome | - | 1538247 | 1538906 | 9739.709335 | 10373.53871 | 11766.28902 | 17838.43796 | 16381.28116 | 16683.6648  | -0.658882127 | 1.307834633 | 1.146497079 |
| <b>B7LBE2</b> | TY-2482_chromosome | - | 1538925 | 1539365 | 7450.975652 | 7226.488162 | 8816.583138 | 13973.75509 | 11906.74175 | 12521.77071 | -0.670465003 | 1.482728506 | 1.30650673  |
| <b>A1ADD7</b> | TY-2482_chromosome | - | 1539515 | 1539820 | 2524.414177 | 2774.390824 | 2497.271749 | 3943.741177 | 4105.921231 | 4114.031166 | -0.672214929 | 3.09717981  | 2.820838046 |
| <b>B7LBE3</b> | TY-2482_chromosome | - | 1539999 | 1540934 | 1184.509184 | 1228.602435 | 954.7611824 | 2821.076929 | 2606.821591 | 2586.183181 | -1.3053441   | 24.23127907 | 23.5246735  |
| <b>D6JC17</b> | TY-2482_chromosome | + | 1541174 | 1541425 | 113.6615016 | 68.65968461 | 75.28388374 | 172.7603353 | 221.8096555 | 240.6338604 | -1.226230993 | 9.68086195  | 9.182640885 |
| <b>B7LBE4</b> | TY-2482_chromosome | + | 1541854 | 1543068 | 2634.581049 | 2523.734643 | 2589.011668 | 2113.785429 | 1975.616056 | 2089.264915 | 0.335969725  | 1.633278486 | 1.443937436 |
| <b>B7LBE5</b> | TY-2482_chromosome | + | 1543155 | 1543751 | 819.3924606 | 902.0086018 | 799.0970238 | 855.6736632 | 835.4775054 | 947.4551723 | -0.097050592 | 0.303148301 | 0.250295993 |
| <b>B7LBE6</b> | TY-2482_chromosome | - | 1543816 | 1545645 | 6711.212777 | 7197.190974 | 6579.012741 | 5378.657664 | 4414.345131 | 5076.293137 | 0.435535988  | 0.895411639 | 0.769078698 |
| <b>B5YX73</b> | TY-2482_chromosome | - | 1545735 | 1546382 | 5675.758103 | 5606.510199 | 5778.481661 | 7078.022147 | 6756.311293 | 7033.757455 | -0.283426252 | 0.466940717 | 0.388906633 |
| <b>B7LBE8</b> | TY-2482_chromosome | - | 1546396 | 1546935 | 5373.575349 | 5334.966813 | 5733.78548  | 6176.581185 | 5309.971468 | 5875.460082 | -0.064879764 | 0.100899138 | 0.079841347 |
| <b>B7LBE9</b> | TY-2482_chromosome | - | 1547021 | 1547473 | 1139.77682  | 1210.956929 | 1248.345527 | 1185.869549 | 1299.302912 | 1281.331493 | -0.064263953 | 0.291889252 | 0.241095448 |
| <b>B7LBF0</b> | TY-2482_chromosome | + | 1547811 | 1549010 | 9227.091826 | 9100.658036 | 9272.652278 | 18201.26774 | 15124.31834 | 15387.92062 | -0.819772853 | 1.79145356  | 1.591489537 |
| <b>B7LBF1</b> | TY-2482_chromosome | + | 1549088 | 1551229 | 11922.56834 | 9787.272797 | 9951.124807 | 15745.97784 | 14268.49164 | 14689.76257 | -0.473897159 | 0.843259346 | 0.72525783  |
| <b>B7LBF2</b> | TY-2482_chromosome | + | 1551422 | 1552939 | 561.050575  | 598.9136704 | 587.6112093 | 1289.503904 | 899.6883218 | 647.2295245 | -0.732077735 | 4.795296536 | 4.441610702 |
| <b>B7LBF3</b> | TY-2482_chromosome | - | 1552978 | 1553517 | 1045.847288 | 1193.246492 | 1239.576185 | 1398.165756 | 1398.536326 | 1383.359944 | -0.272302152 | 2.016310752 | 1.800766875 |
| <b>B7LBF4</b> | TY-2482_chromosome | - | 1553578 | 1554129 | 1149.551536 | 1168.932713 | 1321.368936 | 1460.682921 | 1545.244638 | 1442.623111 | -0.268400821 | 2.287114631 | 2.054817423 |
| <b>B7LBF5</b> | TY-2482_chromosome | - | 1554185 | 1554826 | 285.1058699 | 364.7701523 | 297.6854192 | 236.6222955 | 266.8430579 | 246.1710791 | -0.629269003 | 1.590273305 | 1.404282792 |
| <b>B7LBF6</b> | TY-2482_chromosome | + | 1554962 | 1555606 | 332.9759986 | 365.772993  | 268.0321502 | 113.9004192 | 116.989925  | 98.38316748 | 1.478476428  | 20.59698396 | 19.93970707 |
| <b>B7LBF7</b> | TY-2482_chromosome | + | 1555666 | 1556025 | 1110.832255 | 1339.828564 | 1229.858947 | 534.7704032 | 569.0856918 | 472.1507599 | 1.179909774  | 27.52734399 | 26.78427595 |
| <b>B7LBF8</b> | TY-2482_chromosome | + | 1556049 | 1556939 | 2068.893175 | 2070.910935 | 1891.074407 | 1464.367413 | 1362.292596 | 1340.830414 | 0.512898564  | 6.111465572 | 5.710951506 |
| <b>B7LBF9</b> | TY-2482_chromosome | - | 1556993 | 1557892 | 205.3517686 | 241.0760311 | 224.1331724 | 239.8163215 | 265.8693929 | 306.4565827 | -0.300352454 | 1.244929566 | 1.089359658 |
| <b>B7LBG0</b> | TY-2482_chromosome | - | 1558092 | 1558862 | 416.7861416 | 486.3867054 | 478.2665885 | 472.2043663 | 525.0059884 | 460.4771482 | -0.09968026  | 0.299003722 | 0.246740555 |
| <b>B7LBG1</b> | TY-2482_chromosome | - | 1558873 | 1559586 | 420.9161261 | 381.9734377 | 439.3852778 | 340.0940191 | 397.2957905 | 387.8059045 | 0.182009917  | 0.636486784 | 0.53744007  |
| <b>B7LBG2</b> | TY-2482_chromosome | - | 1559586 | 1560269 | 589.8529337 | 501.0241414 | 625.9920245 | 455.7691967 | 464.2932615 | 421.7775609 | 0.409769252  | 2.636019845 | 2.382882237 |
| <b>B7LBG3</b> | TY-2482_chromosome | - | 1560362 | 1561141 | 2941.263075 | 2482.403859 | 2686.756119 | 1947.405363 | 1844.378161 | 1899.351676 | 0.54611328   | 3.336260822 | 3.04851265  |
| <b>B7LBG4</b> | TY-2482_chromosome | - | 1561365 | 1562144 | 240.957319  | 293.2539279 | 234.584861  | 311.0146487 | 369.3536007 | 340.6434567 | -0.473579916 | 2.506916774 | 2.260121602 |
| <b>B7LBG5</b> | TY-2482_chromosome | - | 1562413 | 1562979 | 217.9069911 | 217.5399877 | 224.0767764 | 552.1398759 | 631.4961449 | 592.4721109 | -1.422332883 | 26.48376804 | 25.75210445 |
| <b>B7LBG6</b> | TY-2482_chromosome | - | 1563077 | 1564591 | 1221.83564  | 1118.364618 | 1103.641872 | 1997.570581 | 2078.651272 | 1841.527721 | -0.776559822 | 11.63449532 | 11.09908374 |
| <b>B7LBG7</b> | TY-2482_chromosome | - | 1564631 | 1565116 | 915.1584159 | 625.4644991 | 715.7841872 | 1163.47085  | 1360.092339 | 1449.388883 | -0.74452525  | 9.544884643 | 9.051543589 |
| <b>B7LBG8</b> | TY-2482_chromosome | - | 1565378 | 1566037 | 2202.412701 | 2184.248134 | 2241.261004 | 1376.245278 | 1499.461213 | 1468.666783 | 0.616993834  | 7.872729304 | 7.421199437 |
| <b>B7LBG9</b> | TY-2482_chromosome | - | 1566030 | 1567295 | 1992.718156 | 1967.6357   | 2015.707808 | 1434.795238 | 1523.924661 | 1380.355263 | 0.465967573  | 4.760892767 | 4.409166749 |
| <b>B7LBH0</b> | TY-2482_chromosome | - | 1567368 | 1568279 | 6246.062778 | 5758.757314 | 6301.365252 | 8115.910303 | 8675.178309 | 8460.445315 | -0.436988199 | 0.854060669 | 0.731981728 |
| <b>B7LBH1</b> | TY-2482_chromosome | - | 1568438 | 1569094 | 819.7254307 | 920.2953477 | 906.4687648 | 753.4422207 | 735.4878144 | 730.5035718 | 0.236734278  | 1.797702534 | 1.597186676 |
| <b>B7LBH2</b> | TY-2482_chromosome | - | 1569180 | 1569989 | 1067.90815  | 1077.701492 | 1061.813846 | 1094.312157 | 1101.696876 | 983.8046577 | 0.00456414   | 0.03979989  | 0.031609809 |
| <b>B7LBH3</b> | TY-2482_chromosome | - | 1569992 | 1571002 | 1483.680934 | 1347.589718 | 1439.585096 | 2168.161369 | 2325.825924 | 2105.935601 | -0.606499564 | 7.828806744 | 7.379240903 |
| <b>B7LBH4</b> | TY-2482_chromosome | - | 1571071 | 1572204 | 2282.247851 | 2442.668104 | 2331.89277  | 2728.28656  | 2879.899992 | 2828.584824 | -0.273619856 | 0.941512439 | 0.811087313 |
| <b>B7LBH5</b> | TY-2482_chromosome | + | 1572303 | 1573295 | 477.7735028 | 447.1219221 | 481.2142266 | 939.7717527 | 1039.743939 | 960.1868824 | -1.043224995 | 21.28501921 | 20.6185569  |
| <b>B7LBH6</b> | TY-2482_chromosome | - | 1573298 | 1574473 | 286.0793331 | 293.4129822 | 276.033154  | 744.2789579 | 885.8569426 | 837.0433753 | -1.539330866 | 34.11579254 | 33.29431294 |
| <b>B7LBH7</b> | TY-2482_chromosome | - | 1574760 | 1575977 | 20770.42487 | 21194.03338 | 21532.22163 | 13930.6542  | 11577.07082 | 11007.10539 | 0.79124536   | 1.649357291 | 1.458398755 |
| <b>B7LBH8</b> | TY-2482_chromosome | + | 1576136 | 1578139 | 2207.328109 | 2325.687978 | 2148.128087 | 1895.558674 | 1766.247675 | 1847.971455 | 0.256003542  | 1.941540741 | 1.73153478  |
| <b>B7LBH9</b> | TY-2482_chromosome | - | 1578266 | 1578541 | 1199.540846 | 1248.116599 | 1146.761524 | 755.3737658 | 873.3851368 | 907.3764301 | 0.487836406  | 5.615856985 | 5.229124367 |
| <b>B7LB10</b> | TY-2482_chromosome | - | 1578578 | 1579123 | 1451.161025 | 1319.66755  | 1399.379759 | 1157.49016  | 1155.930913 | 1177.690612 | 0.278426728  | 2.073208622 | 1.854077293 |
| <b>B7LB11</b> | TY-2482_chromosome | - | 1579126 | 1579932 | 1276.962581 | 1050.413527 | 1208.204313 | 1316.337429 | 1338.197599 | 1296.293785 | -0.114486565 | 0.850891669 | 0.729048997 |
| <b>B7LB12</b> | TY-2482_chromosome | - | 1579935 | 1580756 | 1779.45306  | 1743.406488 | 1577.929924 | 1716.81719  | 1666.676426 | 1591.242942 | 0.017097     | 0.124650073 | 0.100133433 |
| <b>B7LB13</b> | TY-2482_chromosome | - | 1580763 | 1581845 | 3791.967026 | 3597.397103 | 3975.212023 | 3522.999337 | 3325.787028 | 3116.816247 | 0.210072498  | 0.493744427 | 0.411630163 |
| <b>B7LB14</b> | TY-2482_chromosome | - | 1581883 | 1582812 | 2762.95435  | 2455.041596 | 2873.158537 | 2868.540707 | 2906.66442  | 2850.130037 | -0.050535273 | 0.235025481 | 0.295236176 |
| <b>B7LB15</b> | TY-2482_chromosome | + | 1582978 | 1583526 | 1468.279493 | 1739.633571 | 1558.980565 | 1287.56159  | 1350.972799 | 1488.440358 | 0.171263596  | 1.182185282 | 1.030453369 |
| <b>B7LF78</b> | TY-2482_chromosome | - | 1583726 | 1584703 | 1141.41809  | 1184.523897 | 1285.560215 | 1477.7169   | 1434.133945 | 1418.284345 | -0.251389594 | 2.019148102 | 1.803356279 |
| <b>B7LB17</b> | TY-2482_chromosome | - | 1584933 | 1585802 | 551.0633353 | 621.7755423 | 490.5100561 | 446.7421912 | 427.1373533 | 489.8261537 | 0.229781774  | 1.559891726 | 1.377358566 |
| <b>B7LB18</b> | TY-2482_chromosome | - | 1585792 | 1586313 | 82.08417784 | 60.61169094 | 67.73591459 | 110.0206132 | 121.3186759 | 153.4655856 | -0.813398293 | 4.429560598 | 4.092447017 |
| <b>B7LB19</b> | TY-2482_chromosome | - | 1586313 | 1586780 | 44.77816236 | 35.46821411 | 33.44583714 | 45.30472231 | 54.86745342 | 66.27123334 | -0.526671903 | 1.441276468 | 1.26856495  |
| <b>B7LBJ0</b> | TY-2482_chromosome | - | 1586780 | 1587391 | 41.17641899 | 55.63930637 | 44.67805581 | 71.28416006 | 74.81819566 | 71.22842251 | -0.689807802 | 2.16320744  | 1.937937317 |
| <b>B7LBJ1</b> | TY-2482_chromosome | - | 1587303 | 1588052 | 64.90247299 | 62.01152043 | 61.87673652 | 88.64895899 | 89.49438868 | 82.56398176 | -0.466094688 | 1.572516702 | 1.38839126  |
| <b>B7LBJ2</b> | TY-2482_chromosome | - | 1588075 | 1590714 | 371.6310792 | 378.4428703 | 278.1889077 | 344.7750379 | 374.4573318 | 368.8248282 | -0.137808301 | 0.292198123 | 0.241208692 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LBJ3</b> | TY-2482_chromosome | - | 1590799 | 1591359 | 9.144764189 | 16.29709023 | 20.86718075 | 47.79044617 | 55.66192934 | 53.46042541 | -1.756680188 | 7.238385914 | 6.805636672 |
| <b>B7LBJ4</b> | TY-2482_chromosome | - | 1592037 | 1592519 | 848.5693403 | 819.3887359 | 907.7608173 | 1882.556964 | 1838.564866 | 2269.151266 | -1.187275389 | 26.32017839 | 25.59038677 |
| <b>B7LBJ5</b> | TY-2482_chromosome | - | 1592725 | 1594866 | 535.5888888 | 687.7469903 | 596.3480016 | 698.4733517 | 688.6506892 | 642.7992113 | -0.218585024 | 0.826586525 | 0.707409274 |
| <b>B7LBJ6</b> | TY-2482_chromosome | - | 1594869 | 1596176 | 240.9429132 | 297.8155365 | 228.9323999 | 836.254267  | 812.8657117 | 743.5125225 | -1.720046822 | 34.8593418  | 34.03348782 |
| <b>B7LBJ7</b> | TY-2482_chromosome | - | 1596359 | 1596640 | 11765.56907 | 11648.17863 | 10410.9771  | 11722.5022  | 10074.82664 | 10182.41865 | 0.056435235  | 0.092813193 | 0.043239051 |
| <b>D6JCN8</b> | TY-2482_chromosome | - | 1596728 | 1596976 | 26.04194505 | 30.2809619  | 23.28094452 | 27.10452639 | 25.23831084 | 21.11578185 | 0.0648261113 | 0.107086537 | 0.085048177 |
| <b>B7LBJ8</b> | TY-2482_chromosome | + | 1597006 | 1598349 | 4451.553687 | 4107.894708 | 4265.700459 | 5259.652228 | 5784.251881 | 5371.124918 | -0.339740034 | 0.651989287 | 0.550751376 |
| <b>B7LBJ9</b> | TY-2482_chromosome | + | 1598718 | 1599773 | 23.99325736 | 24.95544725 | 16.34210707 | 43.5840303  | 44.68878034 | 38.71918197 | -1.029164889 | 2.686515724 | 2.430564103 |
| <b>B7LBK0</b> | TY-2482_chromosome | - | 1599961 | 1600713 | 2697.677215 | 2430.504262 | 2511.513009 | 2633.190889 | 2777.798422 | 2886.376644 | -0.098212714 | 0.327496323 | 0.270596692 |
| <b>B7LBK2</b> | TY-2482_chromosome | + | 1601007 | 1601936 | 376.006909  | 395.9558882 | 443.5185736 | 172.7900786 | 164.6232678 | 175.9841829 | 1.259726432  | 19.56928925 | 18.92447728 |
| <b>argW</b>   | TY-2482_chromosome | + | 1602015 | 1602089 | 72.63724348 | 95.72569081 | 37.39642182 | 151.3051392 | 257.9841948 | 241.8829694 | -1.833607727 | 9.668222823 | 9.171072143 |
| <b>B7LBK3</b> | TY-2482_chromosome | + | 1602251 | 1603405 | 295.9836757 | 286.0613043 | 320.1236511 | 588.3227107 | 699.5471653 | 778.3733005 | -1.16227099  | 18.63550548 | 17.99830623 |
| <b>B7LBK4</b> | TY-2482_chromosome | + | 1603625 | 1605544 | 1755.554093 | 1810.762094 | 1798.791845 | 778.5557828 | 1116.08026  | 1104.627366 | 0.844072941  | 11.57913548 | 11.04402228 |
| <b>B7LBK5</b> | TY-2482_chromosome | - | 1605621 | 1607597 | 174.15138   | 187.3729432 | 178.2201497 | 117.7946274 | 143.927308  | 166.6590118 | 0.325891692  | 1.280140621 | 1.121569283 |
| <b>A5VW59</b> | TY-2482_chromosome | + | 1609055 | 1609303 | 1079.428115 | 1073.899221 | 1152.061215 | 0           | 0           | 0           | 14.21598834  | 325.0237216 | 323.0330172 |
| <b>D7X4T9</b> | TY-2482_chromosome | + | 1609303 | 1609614 | 1209.232408 | 1136.313905 | 1244.043661 | 0           | 0           | 0           | 14.34484243  | 325.0237216 | 323.0330172 |
| <b>C8TUZ6</b> | TY-2482_chromosome | + | 1609607 | 1610125 | 1473.074607 | 1588.70861  | 1659.177632 | 0           | 0           | 0           | 14.71647007  | 325.0237216 | 323.0330172 |
| <b>B7LTY2</b> | TY-2482_chromosome | - | 1610146 | 1611990 | 727.1139238 | 841.1765813 | 793.066429  | 0           | 0           | 0           | 13.68859574  | 248.6414335 | 246.8776574 |
| <b>B7LBL6</b> | TY-2482_chromosome | - | 1614161 | 1614616 | 37.44272882 | 31.80792586 | 41.38043277 | 67.25572885 | 64.55643956 | 47.82117039 | -0.657622336 | 2.106724618 | 1.88528167  |
| <b>C8TV01</b> | TY-2482_chromosome | - | 1614616 | 1615461 | 99.03918402 | 95.29586624 | 94.92337435 | 82.58724745 | 84.43065702 | 63.07147787 | 0.322983099  | 0.994709334 | 0.858489587 |
| <b>B7LBL8</b> | TY-2482_chromosome | - | 1615464 | 1616879 | 150.111151  | 161.9963258 | 179.2002258 | 416.6080107 | 390.1936006 | 362.776112  | -1.245297814 | 16.73726942 | 16.12488542 |
| <b>B7LBL9</b> | TY-2482_chromosome | - | 1616891 | 1617370 | 46.25776981 | 58.89616876 | 58.64423797 | 184.4990833 | 199.8997783 | 195.7824562 | -1.824797822 | 18.7519386  | 18.1464827  |
| <b>B7LBM1</b> | TY-2482_chromosome | - | 1617576 | 1618844 | 258.0949035 | 277.408418  | 201.9654512 | 831.5358259 | 769.3757826 | 756.1289223 | -1.746016151 | 35.06876019 | 34.23971733 |
| <b>B7LBM2</b> | TY-2482_chromosome | - | 1618859 | 1619740 | 64.11706921 | 58.87687286 | 41.06293932 | 418.3809397 | 396.7900686 | 395.7643435 | -2.930216589 | 54.89320171 | 53.92409193 |
| <b>B7LBM3</b> | TY-2482_chromosome | - | 1619757 | 1621952 | 81.85663479 | 109.3324052 | 85.04426888 | 583.8419115 | 575.2472391 | 563.810291  | -2.720330636 | 61.62335568 | 60.60177471 |
| <b>B7LBM4</b> | TY-2482_chromosome | - | 1621886 | 1623295 | 26.43301234 | 28.71481989 | 32.75731271 | 328.4320122 | 311.4618374 | 333.440513  | -3.455714855 | 59.34587674 | 58.33868365 |
| <b>B7LBM6</b> | TY-2482_chromosome | - | 1623738 | 1623977 | 8.872388953 | 3.220425722 | 20.5092936  | 67.88371375 | 72.60785263 | 74.74637231 | -2.412577083 | 16.53367549 | 15.92282737 |
| <b>E1U309</b> | TY-2482_chromosome | - | 1624100 | 1624794 | 447.141448  | 495.8951498 | 425.6227327 | 409.4585259 | 436.0537263 | 437.9247322 | 0.052990058  | 0.296356611 | 0.244681786 |
| <b>B7LBQ5</b> | TY-2482_chromosome | + | 1625519 | 1626151 | 0.070722904 | 0.190918149 | 1.347747925 | 75.77563955 | 87.21588291 | 80.95840606 | -6.801960034 | 34.52970925 | 33.70707461 |
| <b>B7LBQ6</b> | TY-2482_chromosome | + | 1626064 | 1626534 | 1.616922627 | 0.378542727 | 1.456974055 | 75.77071406 | 83.16124817 | 68.04897964 | -5.762253314 | 30.87260242 | 30.00288238 |
| <b>B7LBQ7</b> | TY-2482_chromosome | + | 1626561 | 1626854 | 0.138449566 | 0.377738378 | 2.651171653 | 36.48874873 | 41.52754273 | 26.15841379 | -4.645829845 | 14.84811221 | 14.2590786  |
| <b>Q716F1</b> | TY-2482_chromosome | + | 1626868 | 1627155 | 3.039440693 | 0.562964883 | 1.551087704 | 33.09310579 | 34.59933412 | 40.52286691 | -4.121346985 | 14.47824391 | 13.89591251 |
| <b>B7LBQ9</b> | TY-2482_chromosome | + | 1627319 | 1627987 | 75.04963311 | 85.95290668 | 76.28565284 | 133.2687476 | 142.237647  | 148.4845957 | -0.870626714 | 5.022983456 | 4.659363647 |
| <b>B7LBR0</b> | TY-2482_chromosome | + | 1628163 | 1628348 | 34.76541319 | 24.68212324 | 22.07985877 | 62.05964849 | 66.9398903  | 61.97642058 | -1.211097871 | 5.091414609 | 4.725578492 |
| <b>B7LBR1</b> | TY-2482_chromosome | + | 1628355 | 1628559 | 55.04632816 | 51.07680167 | 50.43831872 | 80.87656759 | 82.63502341 | 66.02870329 | -0.55550123  | 1.620934188 | 1.620035665 |
| <b>B7LBR2</b> | TY-2482_chromosome | + | 1628559 | 1629185 | 102.1075793 | 170.7741342 | 126.5987478 | 209.0151221 | 246.449645  | 262.9644645 | -0.957396609 | 5.394896583 | 5.016352501 |
| <b>E9U5T6</b> | TY-2482_chromosome | + | 1629244 | 1629480 | 268.1675718 | 295.1759351 | 237.5873637 | 156.6151681 | 272.3036715 | 292.7099509 | 0.115797822  | 0.361370953 | 0.298680643 |
| <b>B7LBR3</b> | TY-2482_chromosome | + | 1629596 | 1629793 | 30.8392098  | 35.3590793  | 26.24350052 | 124.5384553 | 201.2142639 | 218.9476275 | -2.603131567 | 21.53406355 | 20.86517275 |
| <b>B7LBR4</b> | TY-2482_chromosome | - | 1630329 | 1631573 | 80.17949299 | 92.82691726 | 91.80333722 | 179.3940227 | 174.654776  | 194.1408728 | -1.064654494 | 8.222820459 | 7.761083144 |
| <b>P40713</b> | TY-2482_chromosome | - | 1631648 | 1632559 | 44.15806148 | 52.35525934 | 44.69394769 | 71.51215833 | 75.06457987 | 78.45241833 | -0.715548283 | 2.46408907  | 2.220506942 |
| <b>B7LBR6</b> | TY-2482_chromosome | + | 1632766 | 1634205 | 351.2815002 | 405.254664  | 326.6099409 | 473.1805828 | 516.2374685 | 521.791888  | -0.536117635 | 3.90573663  | 3.591994669 |
| <b>B7LBR7</b> | TY-2482_chromosome | + | 1634219 | 1635397 | 2736.929142 | 2770.40754  | 2493.094969 | 3288.436407 | 3543.782484 | 3463.47479  | -0.384016578 | 1.309396279 | 1.147932568 |
| <b>E6A6E9</b> | TY-2482_chromosome | + | 1635442 | 1635657 | 112.7516537 | 148.1014995 | 116.667274  | 102.9901499 | 91.6334477  | 90.87159877 | 0.322341428  | 1.348064202 | 1.348025914 |
| <b>B7LBR9</b> | TY-2482_chromosome | + | 1635678 | 1637003 | 541.2825783 | 503.7349209 | 574.4146389 | 483.9291705 | 487.9736613 | 488.4419463 | 0.18118373   | 0.76037036  | 0.648232809 |
| <b>B7LBS0</b> | TY-2482_chromosome | - | 1637117 | 1638652 | 33.03985815 | 41.83228232 | 38.71331002 | 36.55013538 | 58.74430438 | 54.71998226 | -0.429988529 | 0.851616963 | 0.729568523 |
| <b>B7LBS1</b> | TY-2482_chromosome | + | 1638655 | 1639815 | 13.98721634 | 18.65158059 | 27.9035168  | 16.63547534 | 31.32371602 | 39.59627338 | -0.466629109 | 0.82754039  | 0.708019598 |
| <b>B7LBS2</b> | TY-2482_chromosome | + | 1640231 | 1640842 | 2839.935257 | 3038.641339 | 3149.106333 | 2596.58258  | 2520.967567 | 2941.498333 | 0.168119908  | 0.482982455 | 0.402337176 |
| <b>B7LBS3</b> | TY-2482_chromosome | + | 1640850 | 1644440 | 3202.630132 | 3861.608065 | 3497.0699   | 3800.353633 | 3689.022864 | 3804.627676 | -0.13838     | 0.212063059 | 0.172562803 |
| <b>B7LBS4</b> | TY-2482_chromosome | - | 1644502 | 1645644 | 65.24810443 | 63.48019271 | 73.00502303 | 59.60492823 | 52.01195105 | 74.13844382 | 0.150807563  | 0.223630202 | 0.182507128 |
| <b>B7LBS5</b> | TY-2482_chromosome | - | 1645721 | 1646662 | 18.45598239 | 22.41950661 | 25.51883677 | 16.39028367 | 22.01378527 | 23.42453886 | 0.107579616  | 0.087536406 | 0.069506666 |
| <b>B7LBS6</b> | TY-2482_chromosome | - | 1646735 | 1648426 | 64.69654246 | 72.0232474  | 48.15246602 | 46.74515205 | 61.04012724 | 54.3030734  | 0.112568678  | 0.305254768 | 0.251820693 |
| <b>B7LBS7</b> | TY-2482_chromosome | - | 1648483 | 1649730 | 59.00485721 | 58.76081392 | 74.179813   | 30.44350351 | 41.30615983 | 46.30233351 | 0.748701715  | 2.508817267 | 2.261868499 |
| <b>B7LCC6</b> | TY-2482_chromosome | - | 1650246 | 1650875 | 27.03607946 | 50.64906911 | 34.61772034 | 34.44702432 | 53.74374845 | 58.41912377 | -0.501313727 | 0.757402361 | 0.645715089 |
| <b>B7LCC7</b> | TY-2482_chromosome | + | 1651171 | 1651443 | 158.2485365 | 230.0017406 | 140.223432  | 64.22005987 | 72.39861106 | 70.01378399 | 1.212698407  | 9.975039703 | 9.469053738 |
| <b>B7LCC8</b> | TY-2482_chromosome | - | 1651526 | 1651765 | 1002.401228 | 1396.796888 | 1191.099438 | 339.6139509 | 311.69045   | 353.8727626 | 1.766428581  | 49.82922875 | 48.89587716 |

|        |                    |   |         |         |             |             |             |             |             |               |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|---------------|--------------|-------------|-------------|
| B7LCD0 | TY-2482_chromosome | + | 1652118 | 1653035 | 3141.152115 | 2736.251709 | 2757.338554 | 4566.764226 | 4240.414195 | 4995.668333   | -0.655586587 | 3.302045793 | 3.01454845  |
| B7LCD1 | TY-2482_chromosome | - | 1653533 | 1654768 | 1548.930429 | 1732.258723 | 1326.814343 | 1618.146548 | 1447.767019 | 1448.543421   | -0.03938923  | 0.073803671 | 0.05839589  |
| E1J8V4 | TY-2482_chromosome | + | 1654888 | 1655193 | 239.2839347 | 168.2561901 | 188.5153751 | 199.7455335 | 201.732226  | 208.6603124   | 0.023334557  | 0.039923602 | 0.031609809 |
| B7LCD2 | TY-2482_chromosome | + | 1655145 | 1656839 | 2007.370373 | 1924.857767 | 2106.043942 | 2690.526151 | 2719.453511 | 2735.598421   | -0.409687967 | 2.065254626 | 1.846699285 |
| B7LCD3 | TY-2482_chromosome | + | 1656857 | 1657588 | 1180.308127 | 1233.27449  | 1258.466775 | 1448.530968 | 1361.634099 | 1245.718948   | -0.149674021 | 0.79932842  | 0.682968065 |
| B7LCD4 | TY-2482_chromosome | + | 1657604 | 1658458 | 836.5357891 | 699.757193  | 788.7203456 | 826.9022723 | 800.9306586 | 794.937705    | -0.019845478 | 0.19454358  | 0.157513612 |
| B7LCD5 | TY-2482_chromosome | - | 1658467 | 1660959 | 246.1346623 | 207.5487394 | 191.6224681 | 290.4570268 | 291.1919842 | 287.6497173   | -0.424889168 | 2.485962015 | 2.241005778 |
| B7LCD6 | TY-2482_chromosome | - | 1660987 | 1662021 | 31.70947159 | 45.7966376  | 41.49237025 | 94.16014318 | 89.0584877  | 97.31039162   | -1.288739653 | 6.87195881  | 6.451064208 |
| B7LCD7 | TY-2482_chromosome | - | 1662024 | 1663106 | 73.18240816 | 80.36596636 | 67.83178605 | 148.732804  | 149.3034592 | 151.9544058   | -1.063017453 | 7.178320973 | 6.748523482 |
| B7LCD8 | TY-2482_chromosome | - | 1663124 | 1664368 | 80.4861369  | 102.5188381 | 100.317786  | 99.99088699 | 130.9978784 | 153.9465681   | -0.458409399 | 1.54439318  | 1.363182477 |
| B7LCE0 | TY-2482_chromosome | - | 1664938 | 1665900 | 4670.143097 | 5011.211667 | 5321.34888  | 3413.163835 | 2748.889753 | 3138.003625   | 0.691983021  | 3.422348049 | 3.130613653 |
| B7LCE1 | TY-2482_chromosome | + | 1666104 | 1667357 | 468.0104999 | 456.2260211 | 452.6734929 | 410.4668694 | 409.3945114 | 426.4325195   | 0.146153045  | 0.647740103 | 0.547270369 |
| B7LCE2 | TY-2482_chromosome | + | 1667475 | 1667798 | 216.4144586 | 222.667912  | 229.7683138 | 158.8795169 | 157.3578757 | 151.7252689   | 0.0515388797 | 3.234859065 | 2.950889176 |
| B7LCE3 | TY-2482_chromosome | - | 1667945 | 1669180 | 909.0450418 | 993.3531597 | 998.3951085 | 600.6440431 | 600.1755919 | 666.1128089   | 0.630461522  | 8.867202357 | 8.3895588   |
| B7LCE4 | TY-2482_chromosome | + | 1669516 | 1670715 | 5744.297425 | 4377.983863 | 4540.469602 | 7032.753642 | 5895.676938 | 5321.655237   | -0.287277717 | 0.522011788 | 0.436203175 |
| B7LCE5 | TY-2482_chromosome | - | 1670771 | 1672957 | 1037.048683 | 1039.334016 | 1047.382391 | 2395.692289 | 3113.951792 | 3212.269437   | -1.471281446 | 31.35757812 | 30.57258744 |
| alaW   | TY-2482_chromosome | - | 1673165 | 1673240 | 3910.880749 | 2342.032752 | 1170.482133 | 4095.927691 | 5891.095176 | 6164.975513   | -1.127804121 | 3.930103629 | 3.615464921 |
| alaW   | TY-2482_chromosome | - | 1673280 | 1673355 | 3890.000611 | 2402.551717 | 1233.630205 | 4115.970241 | 5856.746542 | 5963.638224   | -1.093205004 | 3.874777405 | 3.562823402 |
| C8UDX7 | TY-2482_chromosome | + | 1673576 | 1673932 | 1726.390015 | 1869.888338 | 1750.063689 | 1582.992039 | 1439.868812 | 1416.282348   | 0.242416488  | 1.851864718 | 1.647744735 |
| B7LCE7 | TY-2482_chromosome | + | 1673937 | 1674326 | 1250.040825 | 1277.705331 | 1275.819837 | 1338.431077 | 1167.30908  | 1226.324826   | 0.021979573  | 0.100874078 | 0.079841347 |
| B7LCE8 | TY-2482_chromosome | - | 1674384 | 1675796 | 6094.137922 | 4894.246713 | 5267.235149 | 4739.265483 | 4778.172139 | 4565.857787   | 0.243473863  | 0.315863427 | 0.260942813 |
| valY   | TY-2482_chromosome | + | 1676055 | 1676130 | 992.3087622 | 968.1389558 | 720.775832  | 2641.520903 | 4188.905663 | 4411.591963   | -2.103247062 | 22.5734417  | 21.88748497 |
| valY   | TY-2482_chromosome | + | 1676175 | 1676250 | 1881.583232 | 1917.016394 | 1421.867155 | 5404.234444 | 8800.360562 | 9590.199298   | -2.22914701  | 10.54798898 | 10.03155799 |
| valY   | TY-2482_chromosome | + | 1676295 | 1676371 | 860.4931573 | 834.0830511 | 585.8833734 | 2272.001025 | 4161.547811 | 4286.518687   | -2.274245875 | 32.8391179  | 32.03014503 |
| valY   | TY-2482_chromosome | + | 1676416 | 1676491 | 1177.703843 | 1088.497792 | 954.5772158 | 4912.256109 | 6812.159703 | 7970.144729   | -2.611162628 | 30.37700932 | 29.60094102 |
| valY   | TY-2482_chromosome | + | 1676538 | 1676613 | 1541.921552 | 1465.697886 | 1284.984621 | 4214.111768 | 5781.74779  | 6382.437922   | -1.937027677 | 18.69161374 | 18.054037   |
| lysV   | TY-2482_chromosome | + | 1676618 | 1676691 | 1051.291344 | 974.0434259 | 981.4298596 | 1906.688281 | 2533.097899 | 2763.701428   | -1.238818681 | 21.45468024 | 20.78700539 |
| B7LCE9 | TY-2482_chromosome | - | 1676803 | 1677684 | 430.1483948 | 541.0943535 | 542.7309521 | 548.5012909 | 534.6825533 | 589.1413469   | -0.16515691  | 0.646011008 | 0.545979623 |
| B7LCF0 | TY-2482_chromosome | - | 1677939 | 1679192 | 340.5345121 | 267.0493612 | 300.3700932 | 172.3408757 | 166.3321134 | 177.3818988   | 0.861802519  | 7.782176251 | 7.33383343  |
| B7LCF1 | TY-2482_chromosome | - | 1679255 | 1680085 | 10.48058748 | 13.00967999 | 19.49547046 | 22.80558373 | 24.20918037 | 19.33422091   | -0.589882006 | 0.90259846  | 0.77521692  |
| B7LCF2 | TY-2482_chromosome | + | 1680334 | 1681095 | 32.85115039 | 34.42022304 | 38.5535632  | 37.18468313 | 36.54030267 | 44.7241176    | 0.231466687  | 0.189865156 |             |
| B7LCF3 | TY-2482_chromosome | - | 1681140 | 1682063 | 353.0696552 | 256.6518173 | 279.0597864 | 212.2780652 | 186.2848186 | 197.8914632   | 0.621910843  | 4.04335431  | 3.722750173 |
| B7LCF4 | TY-2482_chromosome | + | 1682153 | 1683148 | 1782.214757 | 1455.120373 | 1567.621786 | 1313.053904 | 1212.371481 | 1252.160897   | 0.381761576  | 3.013425394 | 2.741336643 |
| B7LCF5 | TY-2482_chromosome | - | 1683151 | 1683366 | 514.2113573 | 596.8571174 | 566.0364722 | 438.2275372 | 432.1968757 | 416.8870442   | 0.352298829  | 2.841798108 | 2.578571172 |
| B7LCF6 | TY-2482_chromosome | - | 1683371 | 1685383 | 2383.187286 | 2614.837807 | 2550.161006 | 2954.02843  | 3260.695368 | 3066.048258   | -0.312911538 | 1.146724261 | 0.997943397 |
| B7LCF7 | TY-2482_chromosome | - | 1685457 | 1686440 | 7195.943457 | 7832.711403 | 8154.627022 | 9936.694854 | 8659.02426  | 9057.877892   | -0.258504288 | 0.36825684  | 0.304257958 |
| B7LCF8 | TY-2482_chromosome | + | 1686670 | 1687428 | 611.2295294 | 596.3692589 | 637.7621702 | 776.5747743 | 747.1301536 | 767.4436736   | -0.297299313 | 2.415679337 | 2.174680947 |
| B7LCF9 | TY-2482_chromosome | + | 1687616 | 1688584 | 32669.25695 | 31428.1006  | 31973.03896 | 4585.985177 | 4199.187752 | 4227.02835    | 2.889345364  | 13.90955958 | 13.33774112 |
| Q83QP3 | TY-2482_chromosome | + | 1688971 | 1689225 | 19047.05326 | 16814.86945 | 18589.76244 | 19607.78496 | 16339.06554 | 16874.10465   | 0.071705277  | 0.04561441  | 0.036026557 |
| B7LCG1 | TY-2482_chromosome | + | 1689273 | 1690997 | 55363.77514 | 51350.75245 | 53607.29804 | 62328.6747  | 55232.96111 | 53919.64335   | -0.085180102 | 0.100465742 | 0.079615603 |
| B7LCG2 | TY-2482_chromosome | + | 1691041 | 1691547 | 21150.39729 | 19585.58312 | 20917.2987  | 20849.60627 | 20776.56573 | 20230.44158   | 0.015156876  | 0.004718393 | 0.003236901 |
| B7LCG3 | TY-2482_chromosome | - | 1691595 | 1692443 | 1344.761878 | 1439.808062 | 1582.859887 | 1487.997366 | 1433.999826 | 1495.377811   | -0.004815227 | 0.053478745 | 0.042287013 |
| B7LCG4 | TY-2482_chromosome | + | 1692548 | 1692913 | 262.331776  | 269.9496371 | 329.7767955 | 333.6662594 | 337.1314962 | 351.173409735 | -0.531114034 | 3.625840818 | 3.32428852  |
| B7LCG5 | TY-2482_chromosome | - | 1692922 | 1693830 | 2001.019127 | 2104.425283 | 2043.08171  | 538.478078  | 609.0679844 | 611.1495361   | 1.797764281  | 69.92260045 | 68.83816769 |
| B7LCG6 | TY-2482_chromosome | - | 1693967 | 1695061 | 9293.888333 | 9632.438131 | 9475.26764  | 236.5640412 | 237.8975832 | 236.111972    | 5.312795404  | 51.33557495 | 50.38471219 |
| B7LCG7 | TY-2482_chromosome | - | 1695054 | 1695926 | 5333.246162 | 6305.237884 | 5408.136034 | 99.46631253 | 97.72800652 | 75.51340906   | 5.905154562  | 151.922187  | 150.4492217 |
| B7LCG8 | TY-2482_chromosome | - | 1695929 | 1696759 | 5927.100594 | 5977.100594 | 5725.545695 | 184.9440743 | 190.9219007 | 192.4876476   | 4.948618259  | 112.748866  | 111.4672319 |
| B7LCG9 | TY-2482_chromosome | - | 1696762 | 1697775 | 8674.277449 | 8499.622977 | 8106.264846 | 214.5399687 | 225.0874705 | 212.5198273   | 5.268728404  | 62.60904548 | 61.57352874 |
| B7LCH0 | TY-2482_chromosome | - | 1697949 | 1698737 | 6280.42644  | 6173.708953 | 6529.808905 | 10522.93727 | 8827.945634 | 9673.520416   | -0.602032592 | 1.258026081 | 1.101081082 |
| B7LCH1 | TY-2482_chromosome | - | 1698869 | 1699723 | 154.4851966 | 79.58885992 | 126.3640817 | 89.60416001 | 73.77589589 | 77.58372786   | 0.705409965  | 2.235515588 | 2.006621147 |
| B7LCH2 | TY-2482_chromosome | + | 1699887 | 1700780 | 773.9690637 | 821.3696948 | 813.1578725 | 310.0074778 | 243.3971957 | 277.5778781   | 1.1523299478 | 37.53152574 | 36.68082382 |
| B7LCH3 | TY-2482_chromosome | + | 1700787 | 1702208 | 753.7628173 | 685.4498089 | 689.8094607 | 339.5695002 | 321.917577  | 350.0792318   | 1.086462154  | 20.70263142 | 20.04297701 |
| B7LCH4 | TY-2482_chromosome | + | 1702216 | 1703517 | 643.2772995 | 611.2709649 | 572.1521283 | 434.9763368 | 399.3802239 | 454.2494904   | 0.498885316  | 4.8405317   | 4.484482353 |
| D3H2T1 | TY-2482_chromosome | - | 1703579 | 1704502 | 7808.656395 | 8311.366416 | 8885.865439 | 12011.19132 | 10266.81117 | 11347.55369   | -0.422221992 | 0.714886157 | 0.608010132 |
| B7LCH6 | TY-2482_chromosome | - | 1704574 | 1705146 | 840.2947567 | 828.4522574 | 831.9130181 | 2490.035919 | 2760.61393  | 2972.274357   | -1.709128236 | 48.33182022 | 47.40660034 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7LCH7 | TY-2482_chromosome | - | 1705210 | 1705656 | 585.2430473 | 640.5387454 | 550.6401985 | 690.8987937 | 698.9369947 | 733.5742344 | -0.295182078 | 1.771993587 | 1.573406092  |
| D3QM21 | TY-2482_chromosome | - | 1705646 | 1706179 | 564.7238247 | 704.8988979 | 610.7603521 | 734.5031681 | 703.3015848 | 783.4341098 | -0.292361163 | 1.535153916 | 1.354602934  |
| B7LCH9 | TY-2482_chromosome | + | 1706282 | 1707148 | 1240.476696 | 1396.05834  | 1243.000389 | 2243.391561 | 2347.273516 | 2425.952049 | -0.88901636  | 13.79782875 | 13.22730669  |
| C8UE11 | TY-2482_chromosome | + | 1707155 | 1708051 | 744.2944737 | 728.1211773 | 711.3312832 | 1583.696021 | 1635.402724 | 1527.285955 | -1.123547131 | 27.09173434 | 26.3534546   |
| B7LCI1 | TY-2482_chromosome | - | 1708063 | 1709112 | 199.9543415 | 195.6843603 | 202.5448648 | 870.6220183 | 332.1266676 | 300.1073892 | -0.583677606 | 4.338052479 | 4.006574286  |
| B7LCI2 | TY-2482_chromosome | - | 1709161 | 1709658 | 122.5980428 | 63.53673951 | 120.133523  | 82.5142859  | 105.042521  | 79.99070057 | 0.342573453  | 0.462558535 | 0.385567987  |
| B7LCI3 | TY-2482_chromosome | - | 1709674 | 1710330 | 103.5473754 | 148.9698207 | 133.4380838 | 72.65849455 | 68.02147644 | 59.75113143 | 0.87763589   | 5.481248568 | 5.098524526  |
| B7LCI4 | TY-2482_chromosome | - | 1710343 | 1711227 | 109.2276115 | 137.0291635 | 102.4816996 | 44.73842242 | 40.02069892 | 20.49590758 | 1.627794045  | 12.70873555 | 12.15658901  |
| B7LCI5 | TY-2482_chromosome | - | 1711251 | 1712609 | 140.2523044 | 159.1125829 | 153.669794  | 72.84776315 | 64.07841677 | 57.89984739 | 1.18845775   | 10.54998192 | 10.03326512  |
| B7LCI6 | TY-2482_chromosome | - | 1712624 | 1714024 | 107.6739662 | 81.11299506 | 75.32639234 | 67.83076441 | 59.24710791 | 61.05580868 | 0.503860906  | 1.683276479 | 1.490558841  |
| B7LCI7 | TY-2482_chromosome | - | 1714024 | 1715247 | 109.6811002 | 82.8175135  | 90.74423112 | 68.06798942 | 65.52525205 | 74.92806075 | 0.486313086  | 1.582929559 | 1.397606063  |
| B7LCI8 | TY-2482_chromosome | - | 1715567 | 1716751 | 28.2891372  | 33.63758728 | 38.38401868 | 35.78787128 | 36.91978925 | 27.33718889 | -0.001494757 | 0           | 0            |
| B7LCI9 | TY-2482_chromosome | - | 1716744 | 1717577 | 26.70219171 | 4.761423055 | 21.49390417 | 12.47861678 | 20.82469054 | 31.50162998 | 0.014531216  | 0.348076495 | 0.288291176  |
| B7LCJ0 | TY-2482_chromosome | - | 1717591 | 1718991 | 48.11604406 | 47.06612267 | 32.33231463 | 19.29414148 | 32.68127764 | 37.33753924 | 0.472887302  | 1.074284266 | 0.932432811  |
| Q8Z4T7 | TY-2482_chromosome | - | 1719006 | 1719690 | 87.32019504 | 58.85981725 | 88.69128287 | 68.88304845 | 62.68008269 | 64.33392847 | 0.357142278  | 0.716730553 | 0.609074925  |
| B7LCJ3 | TY-2482_chromosome | - | 1719732 | 1720745 | 61.7532798  | 65.03894204 | 57.70087839 | 61.38196511 | 63.91159952 | 46.51017906 | 0.066292092  | 0.162664968 | 0.130908372  |
| B7LCJ4 | TY-2482_chromosome | - | 1720745 | 1721545 | 34.98439474 | 44.10887923 | 49.7850361  | 53.02050886 | 51.82692231 | 42.63817361 | -0.203435079 | 0.339654824 | 0.281264989  |
| B7LCJ5 | TY-2482_chromosome | - | 1721545 | 1722243 | 26.62063433 | 29.46355703 | 36.86367678 | 31.29807649 | 46.65028599 | 29.65015523 | -0.190375347 | 0.297091609 | 0.245024644  |
| B7LCJ6 | TY-2482_chromosome | - | 1722221 | 1722697 | 24.08487045 | 25.27703684 | 17.70254937 | 12.38237414 | 21.88448857 | 22.68046962 | 0.18756145   | 0.272616021 | 0.224746114  |
| B7LCJ8 | TY-2482_chromosome | - | 1723341 | 1725617 | 6420.942783 | 8446.071914 | 6751.554526 | 6153.926211 | 5525.076357 | 4608.824948 | 0.319247317  | 0.715597645 | 0.608164903  |
| B7LCJ9 | TY-2482_chromosome | + | 1725906 | 1726853 | 2420.953211 | 2782.140819 | 2920.496911 | 626.3470934 | 618.6408392 | 459.1871036 | 2.236832973  | 69.85895822 | 68.77558086  |
| B7LCK0 | TY-2482_chromosome | + | 1726876 | 1728876 | 4219.868519 | 4401.206463 | 4825.611051 | 1084.704206 | 1065.786032 | 852.1304186 | 2.167924091  | 33.29589043 | 32.480410658 |
| B7LCK1 | TY-2482_chromosome | - | 1728978 | 1730018 | 325.0446929 | 303.0667061 | 334.5969545 | 398.7058327 | 429.0126973 | 418.0233648 | -0.345462294 | 2.43346852  | 2.191559976  |
| Q1R8R2 | TY-2482_chromosome | + | 1729918 | 1730175 | 144.6069349 | 148.6052889 | 135.3038188 | 181.6864609 | 180.5540048 | 202.0379437 | -0.413992028 | 1.859425568 | 1.654330112  |
| B7LCK2 | TY-2482_chromosome | - | 1730147 | 1730719 | 671.6727081 | 747.4192033 | 704.0539539 | 702.0630762 | 636.0666207 | 702.7064912 | 0.033557885  | 0.193547882 | 0.156707355  |
| B7LCK3 | TY-2482_chromosome | - | 1730790 | 1732766 | 949.9056866 | 1023.651678 | 1161.774271 | 2404.848492 | 1687.884094 | 1859.044053 | -0.915682664 | 11.73393185 | 11.19702527  |
| B7LCK4 | TY-2482_chromosome | + | 1732972 | 1734669 | 993.1936822 | 1032.08007  | 979.993739  | 2063.700156 | 1946.959057 | 2196.839855 | -1.058258609 | 20.41604314 | 19.76191618  |
| B7LCK5 | TY-2482_chromosome | + | 1734836 | 1737946 | 511.4631052 | 492.814992  | 418.6861039 | 1082.41417  | 1150.433115 | 1059.538767 | -1.236734046 | 26.19490334 | 25.46697564  |
| D7Z1B5 | TY-2482_chromosome | + | 1737953 | 1738246 | 2285.038741 | 2477.145934 | 1881.467164 | 1862.40064  | 2140.304521 | 2115.193165 | 0.059940166  | 0.463130602 | 0.386082488  |
| B7LCK6 | TY-2482_chromosome | + | 1738488 | 1738841 | 938.4886115 | 1038.628511 | 1103.061139 | 1102.056434 | 1019.441237 | 1011.679325 | -0.026571636 | 0.089410022 | 0.070654189  |
| B7LCK7 | TY-2482_chromosome | + | 1738848 | 1739972 | 2984.374317 | 3088.765739 | 3124.824713 | 3292.127592 | 3390.828885 | 3474.172754 | -0.142971013 | 0.360801311 | 0.29831197   |
| B7LCK8 | TY-2482_chromosome | + | 1740003 | 1740200 | 838.3999735 | 805.697069  | 763.1839736 | 636.3132061 | 641.5067716 | 654.7217039 | 0.312150759  | 2.604951401 | 2.353058637  |
| B7LCK9 | TY-2482_chromosome | - | 1740316 | 1741011 | 987.4659812 | 1233.731581 | 1136.404224 | 806.5691624 | 899.7076992 | 948.8031456 | 0.301718459  | 2.52606846  | 2.278042992  |
| B7LCL0 | TY-2482_chromosome | - | 1741088 | 1743100 | 2580.962445 | 2462.941889 | 2563.107885 | 2651.88981  | 2689.753494 | 2608.845411 | -0.051665799 | 0.156494123 | 0.126139231  |
| B7LCL1 | TY-2482_chromosome | - | 1743118 | 1743978 | 2417.608014 | 2857.476123 | 2721.092782 | 2113.564677 | 2213.656489 | 2392.928151 | 0.208899206  | 0.797613514 | 0.681743236  |
| B7LCL2 | TY-2482_chromosome | - | 1744128 | 1744523 | 1546.564746 | 1944.106722 | 1744.223896 | 1343.809435 | 1340.104571 | 1384.459461 | 0.316141206  | 2.814150645 | 2.552356763  |
| B7LCL3 | TY-2482_chromosome | - | 1744526 | 1744789 | 969.988394  | 1363.95296  | 1198.168621 | 757.8940206 | 763.0656153 | 822.5342916 | 0.528496639  | 5.998334933 | 5.601741305  |
| B7LCL4 | TY-2482_chromosome | - | 1744908 | 1745618 | 1499.626637 | 1399.773183 | 1256.206691 | 925.4074763 | 943.504189  | 1025.629448 | 0.51359758   | 6.235738522 | 5.831268305  |
| Q32D89 | TY-2482_chromosome | + | 1745669 | 1745917 | 1101.17372  | 1052.416844 | 809.7961626 | 1369.694858 | 1563.394795 | 1502.287132 | -0.621116138 | 6.373049528 | 5.964363904  |
| B7LCL5 | TY-2482_chromosome | - | 1745834 | 1746865 | 12342.88928 | 11901.88151 | 12766.63901 | 17515.30886 | 16856.72904 | 17772.72357 | -0.476334462 | 0.828592041 | 0.708956674  |
| B7LCL6 | TY-2482_chromosome | - | 1746885 | 1747760 | 14319.28361 | 13674.40303 | 14826.88925 | 16016.04228 | 15648.66068 | 16828.13862 | -0.15693906  | 0.221725368 | 0.180984679  |
| C3T0C3 | TY-2482_chromosome | + | 1747840 | 1748475 | 3396.760865 | 3168.82286  | 3287.271207 | 3915.349132 | 3273.901589 | 3737.05111  | -0.135254217 | 0.35796125  | 0.296488448  |
| B7LCL8 | TY-2482_chromosome | + | 1748478 | 1748945 | 3572.03691  | 3186.096181 | 3267.276972 | 4566.382411 | 4163.870022 | 4311.84909  | -0.363467179 | 1.325299295 | 1.162065532  |
| B7LCL9 | TY-2482_chromosome | + | 1749201 | 1749815 | 20.01331964 | 9.558153551 | 10.50857801 | 27.6386717  | 29.81106147 | 30.49049339 | -1.054677088 | 2.641032047 | 2.387426701  |
| B7LCM0 | TY-2482_chromosome | + | 1749818 | 1751833 | 77.55245351 | 72.08820312 | 63.6315093  | 70.49237147 | 87.56481623 | 73.36821142 | -0.13237219  | 0.234060008 | 0.192086635  |
| C8UE52 | TY-2482_chromosome | + | 1751847 | 1752791 | 30.24466204 | 17.18146893 | 25.86048492 | 15.66376801 | 19.74811599 | 22.59336441 | 0.440177999  | 0.484399634 | 0.403649592  |
| B5Z021 | TY-2482_chromosome | + | 1752811 | 1754246 | 21.74324115 | 17.3172253  | 35.00146162 | 31.63297914 | 27.29777861 | 41.45566666 | -0.31059024  | 0.761091931 | 0.648729064  |
| B7LCM5 | TY-2482_chromosome | + | 1754261 | 1754908 | 18.3836093  | 22.13171322 | 24.16011735 | 24.00593583 | 15.57485064 | 30.51768095 | -0.113864047 | 0.111028394 | 0.088532159  |
| B7LCM6 | TY-2482_chromosome | + | 1754916 | 1756493 | 117.6146412 | 87.95281935 | 90.90461083 | 105.7695724 | 109.3447299 | 120.0646214 | -0.138349223 | 0.409948693 | 0.340391187  |
| B7LCM7 | TY-2482_chromosome | + | 1756534 | 1758198 | 165.7217526 | 161.7833243 | 160.9993608 | 174.8646617 | 162.4487981 | 175.9853533 | -0.070177964 | 0.169857045 | 0.137069649  |
| B7LCM8 | TY-2482_chromosome | + | 1758211 | 1758747 | 39.3781563  | 53.94620576 | 37.33600899 | 48.4546097  | 48.92102425 | 53.17183618 | -0.293099472 | 0.362019321 | 0.299027383  |
| B7LCM9 | TY-2482_chromosome | + | 1758747 | 1759502 | 37.27843529 | 48.26444788 | 76.16264262 | 68.98825457 | 47.23390416 | 43.31498894 | 0.069579094  | 0.026001838 | 0.020574181  |
| B7LCN0 | TY-2482_chromosome | + | 1759498 | 1759908 | 29.2500437  | 28.4857263  | 28.77382916 | 27.06015905 | 19.4778216  | 15.26314815 | 0.468858401  | 0.819733049 | 0.701013433  |
| B7LCN1 | TY-2482_chromosome | + | 1759941 | 1761950 | 175.5782956 | 146.1150427 | 199.1122481 | 156.5463891 | 142.6557618 | 157.6050081 | 0.260640027  | 0.667903702 | 0.565125347  |
| B7LCN2 | TY-2482_chromosome | + | 1761975 | 1762703 | 140.9435646 | 207.7957825 | 172.4242314 | 232.7237701 | 213.9885211 | 236.8255844 | -0.470881098 | 1.829139188 | 1.626686364  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LCN3</b> | TY-2482_chromosome | - | 1762863 | 1763921 | 790.0670869 | 810.8486014 | 803.155524  | 1202.458433 | 1148.815733 | 1339.781046 | -0.619100214 | 8.284608779 | 7.821357361 |
| <b>B7LCN4</b> | TY-2482_chromosome | + | 1764134 | 1765594 | 1700.289686 | 1798.259984 | 1696.916119 | 3060.774162 | 2747.101284 | 3023.924807 | -0.783067003 | 5.395627342 | 5.01666707  |
| <b>B7LCN5</b> | TY-2482_chromosome | + | 1765618 | 1765974 | 1353.436793 | 1341.534802 | 1099.783122 | 1411.325105 | 1585.66733  | 1481.418625 | -0.273874177 | 1.583777785 | 1.398187605 |
| <b>C8U815</b> | TY-2482_chromosome | - | 1766118 | 1766861 | 3770.761266 | 3864.955305 | 3554.747919 | 1743.158861 | 1907.581196 | 1685.084493 | 1.047684901  | 9.803765567 | 9.301943532 |
| <b>B7LCN7</b> | TY-2482_chromosome | - | 1766914 | 1768200 | 2096.381295 | 1924.51441  | 1975.601415 | 533.1739243 | 640.416467  | 601.3171232 | 1.773829955  | 63.95700001 | 62.90806029 |
| <b>B7LCN8</b> | TY-2482_chromosome | - | 1768289 | 1768912 | 6042.844248 | 5033.552003 | 5432.489795 | 4496.759978 | 5052.63742  | 5258.412591 | 0.233843726  | 0.227609505 | 0.277375241 |
| <b>B7LCN9</b> | TY-2482_chromosome | + | 1769237 | 1770271 | 839.4347214 | 651.1471322 | 742.8483637 | 1189.659112 | 1488.806494 | 1487.449248 | -0.841957045 | 13.02799918 | 12.46991828 |
| <b>B7LCP0</b> | TY-2482_chromosome | + | 1770274 | 1770909 | 539.6814408 | 513.9470595 | 567.3000048 | 749.1862457 | 736.9239237 | 680.5024996 | -0.398525715 | 3.692624709 | 3.388626659 |
| <b>B7LCP1</b> | TY-2482_chromosome | + | 1771083 | 1773146 | 4556.006451 | 4759.850812 | 4584.696627 | 5159.119333 | 4623.802146 | 4611.823273 | -0.066314318 | 0.064274495 | 0.050935001 |
| <b>B7LCP2</b> | TY-2482_chromosome | + | 1773154 | 1774692 | 2693.448958 | 2788.836564 | 2831.718305 | 3222.552604 | 3223.452425 | 3143.343363 | -0.207821322 | 0.582364484 | 0.489825801 |
| <b>B7LCP3</b> | TY-2482_chromosome | - | 1774737 | 1776977 | 348.3452756 | 377.6810339 | 396.2795796 | 575.3354901 | 505.0967728 | 554.8273751 | -0.543435653 | 4.985845411 | 4.623836371 |
| <b>B7LCP4</b> | TY-2482_chromosome | - | 1777197 | 1777484 | 709.252939  | 663.3464389 | 486.6748644 | 284.4247673 | 311.018699  | 380.3645386 | 0.893562288  | 9.681210803 | 9.182691403 |
| <b>C6UQ6</b>  | TY-2482_chromosome | + | 1777831 | 1778346 | 33.70519294 | 14.45284525 | 35.44539459 | 26.97064204 | 38.25310494 | 37.14785636 | -0.108717805 | 0.429345769 | 0.358027144 |
| <b>B7LCP6</b> | TY-2482_chromosome | + | 1778365 | 1778901 | 82.81193818 | 82.90593295 | 77.77001711 | 92.00326429 | 124.5872153 | 110.5207805 | -0.434409711 | 1.490458161 | 1.31345246  |
| <b>B7LCP7</b> | TY-2482_chromosome | - | 1779000 | 1780574 | 17485.05559 | 15791.26393 | 16430.52694 | 7502.068003 | 7149.7277   | 6660.838602 | 1.236599127  | 3.493812528 | 3.196938492 |
| <b>B7LCP8</b> | TY-2482_chromosome | - | 1780646 | 1782109 | 6904.777583 | 7398.420833 | 7216.700453 | 4330.218032 | 4710.701628 | 4675.749957 | 0.639227617  | 1.504741226 | 1.326819173 |
| <b>B7LCP9</b> | TY-2482_chromosome | - | 1782271 | 1783638 | 2250.830028 | 2047.460305 | 2173.771629 | 3454.269392 | 3328.832019 | 3667.246232 | -0.667074925 | 4.474791322 | 4.135592972 |
| <b>B7LCQ0</b> | TY-2482_chromosome | - | 1783641 | 1783853 | 399.5724735 | 334.1005493 | 409.1602068 | 505.0301262 | 527.1983064 | 599.0949611 | -0.452848536 | 4.041054066 | 3.720813812 |
| <b>B7LCQ1</b> | TY-2482_chromosome | - | 1783925 | 1785394 | 3148.400995 | 3123.376247 | 3254.101678 | 3051.339104 | 3406.746584 | 3203.26517  | -0.0105816   | 0.039584512 | 0.031506016 |
| <b>B7LCQ2</b> | TY-2482_chromosome | - | 1785515 | 1786690 | 9356.599522 | 7849.917705 | 8978.014879 | 8949.72202  | 8966.596067 | 8975.128464 | 0.005513359  | 0.043293281 | 0.034238742 |
| <b>B7LCQ3</b> | TY-2482_chromosome | - | 1786704 | 1787321 | 4314.835017 | 3732.152746 | 4088.916123 | 5149.154551 | 5323.951909 | 5519.714821 | -0.362837649 | 0.768333644 | 0.655068347 |
| <b>B7LCQ4</b> | TY-2482_chromosome | - | 1787342 | 1788613 | 7424.762795 | 7561.372832 | 7755.385703 | 10868.77081 | 11524.35925 | 11496.73855 | -0.57398871  | 1.12041194  | 0.974196898 |
| <b>B7LDA7</b> | TY-2482_chromosome | - | 1788727 | 1789842 | 8592.960366 | 7759.124584 | 8526.883489 | 8886.403283 | 8517.851229 | 8833.847497 | -0.047752755 | 0.091258672 | 0.071893337 |
| <b>B7LDA8</b> | TY-2482_chromosome | - | 1789872 | 1790882 | 7929.231402 | 6273.137105 | 7156.36414  | 6530.085108 | 5779.669328 | 6127.172121 | 0.260026483  | 0.303825316 | 0.250874741 |
| <b>B7LDA9</b> | TY-2482_chromosome | - | 1791170 | 1792321 | 2011.729314 | 1759.404474 | 1885.029973 | 3569.399223 | 4681.501114 | 4355.413113 | -1.123268728 | 8.608770748 | 8.137353742 |
| <b>D3HM8</b>  | TY-2482_chromosome | + | 1792438 | 1792962 | 4634.496567 | 3825.802136 | 3780.450829 | 850.2696526 | 1167.940119 | 1080.306449 | 2.0086641    | 26.84201396 | 26.10658207 |
| <b>B7LDB1</b> | TY-2482_chromosome | - | 1793054 | 1795363 | 787.8968988 | 729.0593833 | 709.9996044 | 969.6668773 | 913.544471  | 992.766276  | -0.363902024 | 3.331308205 | 3.042966752 |
| <b>B7LDB2</b> | TY-2482_chromosome | - | 1795367 | 1800325 | 6350.201165 | 6008.219944 | 6541.269299 | 6718.495167 | 6447.511119 | 6651.151505 | -0.046274579 | 0.084207171 | 0.066811769 |
| <b>C8TVL6</b> | TY-2482_chromosome | + | 1800532 | 1801374 | 2179.642509 | 2194.44999  | 2172.39517  | 2564.853257 | 2519.125022 | 2658.399302 | -0.24339474  | 0.858470325 | 0.735152524 |
| <b>ryfA</b>   | TY-2482_chromosome | + | 1801567 | 1801871 | 4734.201095 | 4362.464115 | 4268.777706 | 6190.958337 | 6357.326952 | 5769.583495 | -0.452027395 | 0.904457328 | 0.77695912  |
| <b>B7LDB4</b> | TY-2482_chromosome | - | 1801873 | 1802644 | 2223.610885 | 2342.586605 | 2191.188149 | 1291.675656 | 1297.628384 | 1220.263963 | 0.825876945  | 14.34367722 | 13.85343229 |
| <b>B7LDB5</b> | TY-2482_chromosome | - | 1802791 | 1804071 | 6445.988151 | 5898.074408 | 6568.548373 | 2851.118449 | 2794.948807 | 2767.693005 | 1.197517395  | 4.200957011 | 3.875226235 |
| <b>B7LDB6</b> | TY-2482_chromosome | - | 1804252 | 1804449 | 1750.326756 | 1754.194346 | 1597.986285 | 540.2170114 | 521.2790872 | 562.7892358 | 1.63489965   | 59.3076951  | 58.30138562 |
| <b>B7LDB7</b> | TY-2482_chromosome | - | 1804464 | 1804796 | 2299.8117   | 2196.463076 | 2311.639753 | 761.8808504 | 764.6878481 | 699.3799431 | 1.624295296  | 52.48271696 | 51.52638146 |
| <b>B7LDB8</b> | TY-2482_chromosome | - | 1804801 | 1806648 | 5596.185813 | 5661.292674 | 5723.91124  | 3285.239407 | 3349.088858 | 3088.364754 | -0.802922894 | 2.269597595 | 2.038873981 |
| <b>B7LDB9</b> | TY-2482_chromosome | - | 1806668 | 1807180 | 1337.520095 | 1257.753933 | 1316.034793 | 1014.421428 | 1029.497707 | 938.3245164 | 0.403553014  | 4.113601569 | 3.791538843 |
| <b>B5Z102</b> | TY-2482_chromosome | - | 1807279 | 1807605 | 4542.650593 | 4186.245652 | 4489.720586 | 2073.899751 | 2186.293438 | 2136.605031 | 1.070108756  | 7.330721173 | 6.894753868 |
| <b>Q8FF43</b> | TY-2482_chromosome | + | 1807535 | 1808014 | 5357.176497 | 5168.759388 | 5544.196008 | 2723.559796 | 2890.072476 | 2733.596727 | 0.962091895  | 6.170956284 | 5.768468648 |
| <b>B7LDC2</b> | TY-2482_chromosome | - | 1808033 | 1809244 | 9509.596057 | 8459.483241 | 9365.935476 | 6691.728286 | 7445.958686 | 6848.016266 | 0.413422039  | 0.635472815 | 0.536604751 |
| <b>B7LDC3</b> | TY-2482_chromosome | - | 1809359 | 1809844 | 1349.167096 | 1382.958498 | 1362.065542 | 2228.649512 | 2450.017803 | 2709.499366 | -0.85077039  | 12.91077924 | 12.35489413 |
| <b>B7LDC4</b> | TY-2482_chromosome | - | 1810117 | 1810854 | 3857.188332 | 4049.107137 | 3991.239237 | 6805.015459 | 6602.357242 | 6855.153258 | -0.776067321 | 2.013239724 | 1.798124357 |
| <b>B7LDC5</b> | TY-2482_chromosome | + | 1810973 | 1811773 | 2310.448842 | 2056.430797 | 1868.297383 | 2966.660792 | 4136.435622 | 4648.29259  | -0.903628411 | 5.068684049 | 4.704039667 |
| <b>B7LDC6</b> | TY-2482_chromosome | + | 1811894 | 1812772 | 73.45366691 | 85.54662924 | 74.86059438 | 216.0874851 | 270.2168754 | 271.105298  | -1.729257492 | 19.09413759 | 18.45314866 |
| <b>B7LDC7</b> | TY-2482_chromosome | + | 1812966 | 1814243 | 992.5974783 | 933.2221316 | 849.5510877 | 410.6672506 | 423.259712  | 450.9982413 | 1.103867264  | 23.4608511  | 22.76431024 |
| <b>B7LDC8</b> | TY-2482_chromosome | - | 1814241 | 1815377 | 496.4241436 | 434.0154125 | 379.9571876 | 776.862022  | 937.4041492 | 919.6409824 | -1.009820252 | 15.1912805  | 14.59543962 |
| <b>B7LDC9</b> | TY-2482_chromosome | - | 1815540 | 1816427 | 204.4345902 | 171.6559615 | 198.1684408 | 144.2638379 | 130.5276932 | 140.4533814 | 0.509190301  | 2.555093402 | 2.305370564 |
| <b>B7LDD0</b> | TY-2482_chromosome | + | 1816563 | 1817921 | 66.6229943  | 77.73205548 | 56.57400659 | 47.85718636 | 46.82226724 | 37.5271866  | 0.522648306  | 1.852103472 | 1.642744735 |
| <b>B7LDD1</b> | TY-2482_chromosome | + | 1817921 | 1818436 | 31.40039995 | 40.99256201 | 35.91383222 | 20.21661029 | 28.52106464 | 20.78378742 | 0.585067235  | 1.424406604 | 1.253117096 |
| <b>B7LDD2</b> | TY-2482_chromosome | + | 1818439 | 1818756 | 19.02126982 | 13.62578758 | 14.57369485 | 12.61053081 | 23.55380367 | 25.64266106 | -0.34047153  | 0.477597969 | 0.39787622  |
| <b>B7LDD3</b> | TY-2482_chromosome | + | 1818756 | 1819565 | 49.72990835 | 75.85927328 | 61.77265037 | 56.35444391 | 61.40546219 | 59.85548771 | -0.004533332 | 0.088666084 | 0.070262709 |
| <b>B7LDD4</b> | TY-2482_chromosome | + | 1819578 | 1820777 | 167.5115997 | 162.9728858 | 175.1469794 | 102.8717498 | 79.82867041 | 69.82073396 | 0.898491069  | 6.684261047 | 6.297928404 |
| <b>C8UEB1</b> | TY-2482_chromosome | + | 1820832 | 1821296 | 344.4410651 | 289.9829931 | 367.3737178 | 115.9899716 | 133.3281307 | 128.0401552 | 1.469761171  | 20.44590025 | 19.79020119 |
| <b>B7LDD6</b> | TY-2482_chromosome | - | 1821350 | 1822219 | 100.0204143 | 145.7293646 | 109.4745596 | 94.63893048 | 88.65928777 | 94.91660875 | 0.254213924  | 1.009005942 | 0.871952044 |
| <b>B7LDD7</b> | TY-2482_chromosome | - | 1822234 | 1823292 | 94.83952482 | 97.28680743 | 118.6900008 | 86.15041    | 89.11327327 | 82.6212888  | 0.299059553  | 0.810351901 | 0.692546108 |
| <b>B7LDD8</b> | TY-2482_chromosome | - | 1823361 | 1824356 | 25.96339399 | 29.96991105 | 21.91714903 | 25.36297755 | 26.44980689 | 35.32550261 | -0.21910338  | 0.185294927 | 0.149966965 |



|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7LDD9 | TY-2482_chromosome | - | 1824384 | 1825892 | 55.70249706 | 26.30101972 | 44.55438619 | 63.85051447 | 56.83993481 | 55.87932436 | -0.351595218 | 1.134625628 | 0.987190656  |
| B7LDE1 | TY-2482_chromosome | - | 1826998 | 1830276 | 95.4914054  | 121.8659733 | 141.4640941 | 131.9433563 | 131.1342622 | 113.6098553 | -0.070422576 | 0.145165492 | 0.11704396   |
| B7LDE2 | TY-2482_chromosome | + | 1830394 | 1831584 | 362.0542157 | 349.1343368 | 310.782014  | 313.1626077 | 309.5256111 | 320.0324    | 0.099871641  | 0.404908886 | 0.336418534  |
| B7LDE3 | TY-2482_chromosome | + | 1831654 | 1832904 | 15157.06446 | 12199.62861 | 13208.01827 | 11153.74106 | 10722.55997 | 10769.16614 | 0.351048121  | 0.450458368 | 0.376076208  |
| B7LDE4 | TY-2482_chromosome | + | 1833232 | 1834419 | 1110.752753 | 1269.971051 | 1252.685486 | 1362.398327 | 1218.684027 | 1205.414483 | -0.08128145  | 0.263815582 | 0.217303452  |
| B7LDE5 | TY-2482_chromosome | - | 1834470 | 1834805 | 1978.138427 | 1270.394219 | 1925.422671 | 1360.386932 | 1424.599535 | 1443.870759 | 0.480882394  | 5.475956324 | 5.0293442238 |
| B7LDE6 | TY-2482_chromosome | - | 1834869 | 1836200 | 860.3423331 | 656.311238  | 714.2988627 | 1223.53636  | 1168.77819  | 1007.966325 | -0.569862304 | 6.359765819 | 5.951525853  |
| B7LDE7 | TY-2482_chromosome | - | 1836193 | 1836903 | 509.720086  | 451.7709922 | 432.8294801 | 943.207438  | 862.401913  | 888.4265517 | -0.945893568 | 16.07913111 | 15.4721717   |
| B7LDE8 | TY-2482_chromosome | - | 1837071 | 1838495 | 923.1943868 | 880.1773043 | 945.246033  | 960.860172  | 973.1935033 | 1098.986186 | -0.118622944 | 0.72044024  | 0.612673126  |
| sroF   | TY-2482_chromosome | - | 1838589 | 1838737 | 22339.65736 | 13598.41138 | 3760.063464 | 5081.153348 | 8039.658833 | 4108.98805  | 1.125752843  | 2.088912463 | 1.868337814  |
| B7LDE9 | TY-2482_chromosome | - | 1839074 | 1842958 | 3700.612257 | 3484.421385 | 3431.105147 | 2089.32104  | 2267.336632 | 2223.231446 | 0.695879994  | 4.201372276 | 3.875457282  |
| B7LDF0 | TY-2482_chromosome | + | 1843354 | 1844769 | 344.1407607 | 322.5072516 | 299.2101357 | 662.597061  | 871.4395465 | 943.2743299 | -1.354183225 | 22.27251983 | 21.5908608   |
| B7LDF1 | TY-2482_chromosome | - | 1844772 | 1845305 | 1193.104781 | 1232.341241 | 1181.115909 | 1352.732227 | 1574.998551 | 1916.833657 | -0.42560879  | 3.518580921 | 3.220844334  |
| B7LDF2 | TY-2482_chromosome | - | 1845333 | 1845965 | 2127.51077  | 2078.52331  | 2080.45888  | 1435.924125 | 1362.38451  | 1586.98679  | 0.526403889  | 5.655519729 | 5.26687532   |
| D3H3S1 | TY-2482_chromosome | + | 1846102 | 1847019 | 776.4366488 | 613.4580627 | 775.507624  | 1060.135071 | 1050.564274 | 1083.347019 | -0.493671563 | 6.089148137 | 5.68928994   |
| B5Z135 | TY-2482_chromosome | + | 1847054 | 1847335 | 110.5167843 | 106.8680357 | 110.619185  | 352.6001031 | 500.062732  | 572.1348469 | -2.095003908 | 30.67219841 | 29.89404716  |
| B7LDF6 | TY-2482_chromosome | - | 1848035 | 1848412 | 936.7008383 | 1042.551227 | 1021.439759 | 767.5984756 | 794.8531276 | 766.8753783 | 0.348852754  | 3.384568486 | 3.093684814  |
| B7LDF7 | TY-2482_chromosome | - | 1848415 | 1849143 | 2815.25638  | 2834.089209 | 2927.967669 | 1961.173375 | 1933.420801 | 1985.208514 | 0.550736094  | 3.079527127 | 2.882687285  |
| B7LDF8 | TY-2482_chromosome | - | 1849158 | 1849883 | 1075.921982 | 1061.4195   | 1044.615486 | 1254.715089 | 1406.287968 | 1199.286229 | -0.282696654 | 2.176722862 | 1.950619432  |
| B7LDF9 | TY-2482_chromosome | - | 1849898 | 1850800 | 2589.023221 | 2571.4687   | 2406.793704 | 6154.95239  | 6535.813453 | 5757.559168 | -1.300203556 | 5.318911724 | 4.942856442  |
| B7LDG0 | TY-2482_chromosome | - | 1850800 | 1851477 | 1978.078288 | 1853.53374  | 2088.740812 | 5205.967839 | 5789.551609 | 5785.809182 | -1.470261789 | 13.7477699  | 13.17789459  |
| B7LDG1 | TY-2482_chromosome | - | 1851753 | 1852724 | 5462.52928  | 5217.267186 | 5087.563461 | 3311.669405 | 3359.21635  | 3004.901966 | 0.701431978  | 2.22982387  | 1.994971204  |
| B7LDG2 | TY-2482_chromosome | - | 1852743 | 1854539 | 5039.763581 | 4546.874191 | 4637.915202 | 7998.659111 | 8813.102305 | 7848.274562 | -0.779632098 | 1.976481532 | 1.763502394  |
| B7LDG3 | TY-2482_chromosome | - | 1854740 | 1855216 | 1164.386061 | 863.7113991 | 1031.561423 | 3893.166518 | 4062.413377 | 4597.983208 | -1.967451804 | 28.66284593 | 27.90757094  |
| B7LDG4 | TY-2482_chromosome | - | 1855216 | 1856169 | 3710.210022 | 3242.775874 | 3484.101134 | 11127.44264 | 10894.386   | 12232.33382 | -1.68253595  | 6.883353827 | 6.462229864  |
| B7LDG5 | TY-2482_chromosome | - | 1856172 | 1856819 | 8290.885611 | 7532.572327 | 8940.371448 | 23081.48927 | 21686.89776 | 26422.53686 | -1.475256551 | 4.736668426 | 4.411551151  |
| B7LDG6 | TY-2482_chromosome | - | 1856855 | 1857427 | 6880.386011 | 7210.68055  | 7317.170762 | 15939.85389 | 15537.93965 | 19493.53988 | -1.24602829  | 3.570425824 | 3.270264939  |
| B7LDG7 | TY-2482_chromosome | + | 1857835 | 1859454 | 390.365531  | 420.5795318 | 402.3386321 | 453.738367  | 476.2273381 | 494.6651939 | -0.246061527 | 1.286882412 | 1.127934898  |
| B7LDG8 | TY-2482_chromosome | - | 1859445 | 1860179 | 243.6848423 | 220.3192467 | 246.9701436 | 535.1414343 | 578.8221257 | 565.3670964 | -1.207829363 | 20.51843115 | 19.86154926  |
| B7LDG9 | TY-2482_chromosome | + | 1860311 | 1861642 | 178.243448  | 1636.12278  | 1633.844574 | 3615.3983   | 4634.054394 | 4277.530014 | -1.262849842 | 11.07885807 | 10.55113855  |
| B5Z151 | TY-2482_chromosome | - | 1861857 | 1862780 | 276.4816384 | 326.1730766 | 247.7140485 | 440.1526557 | 480.2365331 | 557.8530812 | -0.861974207 | 7.910462344 | 7.458193672  |
| B7LDH1 | TY-2482_chromosome | + | 1862838 | 1863422 | 1341.943588 | 1265.715556 | 1099.684843 | 1257.498343 | 1272.949705 | 1344.07269  | -0.080120042 | 0.274246461 | 0.22612415   |
| B7LDH2 | TY-2482_chromosome | - | 1863483 | 1863863 | 80556.26181 | 72194.33425 | 71968.92972 | 78456.04128 | 85210.01504 | 95903.03736 | -0.188834176 | 0.236909241 | 0.19391599   |
| B7LDH3 | TY-2482_chromosome | + | 1864168 | 1864854 | 2033.544025 | 1915.740834 | 2309.740681 | 2115.843317 | 1897.780523 | 2118.871871 | 0.072012062  | 0.108692292 | 0.086379265  |
| B7LDH4 | TY-2482_chromosome | - | 1864908 | 1865942 | 2877.183671 | 2978.270708 | 3114.650424 | 4106.332783 | 4285.559677 | 4428.274623 | -0.432274623 | 1.674858196 | 1.948281799  |
| B7LDH6 | TY-2482_chromosome | + | 1866149 | 1866565 | 401.0480413 | 363.1621317 | 363.6911391 | 443.1053038 | 543.2691538 | 564.5027705 | -0.440993103 | 3.369607184 | 3.079572573  |
| D3H3U5 | TY-2482_chromosome | + | 1866586 | 1867332 | 374.2991822 | 268.7565435 | 310.5077156 | 522.6799923 | 523.6411283 | 520.6276008 | -0.657163992 | 6.815232284 | 6.396168219  |
| B7LDH8 | TY-2482_chromosome | + | 1867367 | 1870024 | 4164.0467   | 4187.87702  | 3928.264111 | 4813.150383 | 4179.642191 | 4457.345233 | -0.146311628 | 0.211241297 | 0.172026793  |
| B7LDH9 | TY-2482_chromosome | + | 1870141 | 1871493 | 3099.727217 | 3172.352885 | 3219.657197 | 6512.025515 | 6567.274905 | 6594.055341 | -1.050868661 | 3.455125321 | 3.161855409  |
| B5Z160 | TY-2482_chromosome | + | 1871521 | 1871862 | 1690.72691  | 1423.208186 | 1209.126879 | 1092.54817  | 1298.654283 | 1275.955926 | 0.234465976  | 1.350348034 | 1.18508248   |
| B7LDI1 | TY-2482_chromosome | - | 1871865 | 1873160 | 2103.660143 | 1795.29256  | 1540.962614 | 1553.851482 | 1778.873562 | 1856.230485 | 0.066210669  | 0.234420787 | 0.192244412  |
| Q1RFY5 | TY-2482_chromosome | + | 1873415 | 1873718 | 10815.30616 | 52398.95157 | 6514.28635  | 683.1472162 | 66.6588309  | 36.78401249 | 5.655936318  | 12.2134034  | 11.66863881  |
| rrfC   | TY-2482_chromosome | - | 1873484 | 1873603 | 7903.354899 | 29127.77792 | 402.3713109 | 669.0319349 | 42.18051417 | 22.54608595 | 4.765178492  | 7.001336725 | 6.577450944  |
| rrfE   | TY-2482_chromosome | - | 1873697 | 1876600 | 1324039.86  | 13430027.43 | 3698289.184 | 3102.059681 | 1023.950196 | 282.0164549 | 11.31135629  | 30.28428258 | 29.50976997  |
| C1HUN0 | TY-2482_chromosome | + | 1873922 | 1874278 | 162169.6668 | 1657204.269 | 450589.2949 | 537.5700745 | 154.699486  | 45.12125832 | 10.8662129   | 28.74912373 | 27.99335326  |
| C1HUN1 | TY-2482_chromosome | + | 1874282 | 1874734 | 215475.9991 | 2387119.82  | 576978.6606 | 969.220058  | 270.4031231 | 61.5557725  | 10.47917957  | 25.49044659 | 24.76943823  |
| C1HUN3 | TY-2482_chromosome | + | 1874811 | 1875014 | 111117.7537 | 1359321.251 | 338754.3542 | 217.7407925 | 55.62063805 | 19.70372127 | 11.83083059  | 31.02745267 | 30.24457793  |
| Q1R3T8 | TY-2482_chromosome | + | 1876072 | 1876374 | 273061.7196 | 2221693.716 | 741498.0292 | 387.1665364 | 97.42338757 | 25.39526861 | 12.00548371  | 31.90693772 | 31.11391919  |
| gltV   | TY-2482_chromosome | - | 1876794 | 1876869 | 3090.431134 | 3196.285432 | 1890.819769 | 15206.97254 | 23558.91315 | 24659.62584 | -3.040549411 | 13.55464912 | 12.9879932   |
| rrsD   | TY-2482_chromosome | - | 1877041 | 1878582 | 1811934.117 | 7970796.788 | 3935779.493 | 2453.709987 | 569.0478463 | 163.6806257 | 11.63940046  | 33.38948921 | 32.57430799  |
| Q57H85 | TY-2482_chromosome | - | 1877144 | 1877461 | 462169.59   | 2046717.675 | 939895.4951 | 178.6407323 | 126.9434061 | 57.24566934 | 12.79231723  | 58.47180616 | 57.47163213  |
| E9WNY3 | TY-2482_chromosome | + | 1878436 | 1878669 | 201204.8585 | 923142.6703 | 403923.4077 | 1211.265511 | 447.0780864 | 239.7669528 | 9.194242512  | 34.96848921 | 34.14061854  |
| B7LDI2 | TY-2482_chromosome | - | 1879029 | 1881599 | 11655.89736 | 9984.43953  | 8914.145866 | 4405.292335 | 4785.033647 | 3877.529433 | 1.218866521  | 3.830945258 | 3.521659466  |
| B7LDI3 | TY-2482_chromosome | - | 1881732 | 1882460 | 1808.8611   | 1702.120761 | 1774.362713 | 1721.96661  | 1686.4234   | 1606.906048 | 0.087786816  | 0.324092492 | 0.267688461  |
| B7LDI4 | TY-2482_chromosome | - | 1882460 | 1883437 | 2595.929956 | 2705.170805 | 2713.937322 | 2715.963472 | 2606.085241 | 2568.281377 | 0.016697696  | 0.050198309 | 0.039631012  |

|        |                    |   |         |         |             |             |             |              |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|
| B7LDI5 | TY-2482_chromosome | + | 1883572 | 1884306 | 4538.126686 | 4671.772682 | 4633.469713 | 6401.076894  | 6335.083819 | 6654.060123 | -0.489557557 | 0.989656293 | 0.85415026   |
| Q1R8C8 | TY-2482_chromosome | - | 1884502 | 1885035 | 43149.55395 | 45101.5154  | 40283.38684 | 51098.43327  | 57293.26067 | 69076.92155 | -0.481816642 | 0.670808564 | 0.567589077  |
| B7LDI8 | TY-2482_chromosome | + | 1885171 | 1886328 | 972.3349253 | 974.7966449 | 1107.306796 | 1591.351279  | 1433.493908 | 1449.522598 | -0.529493806 | 6.861756202 | 6.441319958  |
| B7LDI9 | TY-2482_chromosome | - | 1886377 | 1887495 | 774.2034877 | 885.8287384 | 836.1822103 | 751.3470731  | 753.6191632 | 739.7187704 | 0.125718003  | 0.793930005 | 0.678286867  |
| B7LDJ0 | TY-2482_chromosome | - | 1887509 | 1888576 | 634.8833287 | 811.547243  | 759.8875558 | 1099.10298   | 1123.653242 | 1154.758546 | -0.653680572 | 7.534434974 | 7.0907488429 |
| B7NRQ4 | TY-2482_chromosome | + | 1888657 | 1889148 | 253.1322095 | 243.5181295 | 214.539038  | 119.1538791  | 130.4795235 | 139.8861398 | 0.854131458  | 7.45957638  | 7.019220253  |
| B7LDJ2 | TY-2482_chromosome | + | 1889301 | 1889816 | 1150.783621 | 1283.042425 | 1019.243402 | 1239.973732  | 1303.883897 | 1495.533975 | -0.277455633 | 1.436328836 | 1.264005601  |
| B7LDJ3 | TY-2482_chromosome | + | 1889809 | 1891032 | 1011.068795 | 1112.184142 | 937.1858531 | 1188.743627  | 1192.171379 | 1139.680931 | -0.24829776  | 1.354689893 | 1.188914903  |
| B7LDJ4 | TY-2482_chromosome | + | 1891051 | 1891530 | 469.7438573 | 522.2914035 | 415.787978  | 531.7721272  | 554.0355027 | 528.3626092 | -0.254280718 | 1.064900786 | 0.923651931  |
| B7LDJ5 | TY-2482_chromosome | - | 1891613 | 1891957 | 37425.13733 | 37665.2832  | 36905.385   | 12204.7786   | 13885.94558 | 14038.27291 | 1.480393268  | 4.340580209 | 4.008915343  |
| B7LDJ6 | TY-2482_chromosome | - | 1892002 | 1892766 | 81944.90911 | 80254.58378 | 84810.06351 | 33025.67046  | 34456.75739 | 34062.80904 | 1.296257221  | 3.177672752 | 2.897201898  |
| Q31XD7 | TY-2482_chromosome | - | 1892800 | 1893354 | 58587.1155  | 56544.92126 | 61066.60889 | 26882.47957  | 29096.33133 | 28703.09888 | 1.077660623  | 2.360272342 | 2.122895608  |
| B7LDJ8 | TY-2482_chromosome | - | 1893367 | 1893612 | 30596.79106 | 28844.86324 | 28746.24953 | 13942.45519  | 16765.1988  | 15776.01459 | 0.933298059  | 2.01998543  | 1.804012621  |
| B7LDJ9 | TY-2482_chromosome | - | 1893752 | 1895110 | 8298.829222 | 7735.662778 | 8166.347168 | 8279.775332  | 8213.767288 | 8314.966603 | -0.017481645 | 0.040814484 | 0.032115124  |
| B7LDK0 | TY-2482_chromosome | + | 1895202 | 1896065 | 727.8302135 | 658.3718838 | 688.2576682 | 1227.675593  | 1230.182814 | 1267.982827 | -0.824479826 | 14.92839357 | 14.33732896  |
| B7LDK1 | TY-2482_chromosome | + | 1896179 | 1897372 | 1077.406932 | 1060.553022 | 990.1959293 | 1894.577348  | 1799.29756  | 1657.808976 | -0.790419963 | 12.74185437 | 12.18908696  |
| A1AEE4 | TY-2482_chromosome | + | 1897397 | 1898146 | 7736.958258 | 8281.826152 | 8114.642953 | 3610.806527  | 3686.870891 | 4081.282889 | 1.077324521  | 3.428948171 | 3.13670254   |
| B7LDK3 | TY-2482_chromosome | + | 1898146 | 1899021 | 1662.461591 | 1567.882921 | 1553.2745   | 17209.731657 | 1155.189158 | 1300.026994 | 0.392121608  | 3.798504909 | 3.007910489  |
| B7LDK4 | TY-2482_chromosome | + | 1899110 | 1900768 | 1699.832311 | 1579.668988 | 1603.504446 | 2047.792599  | 1968.528464 | 2097.18596  | -0.312067338 | 2.536649053 | 2.288315465  |
| B7LDK5 | TY-2482_chromosome | + | 1900920 | 1901258 | 2286.717139 | 2352.888943 | 2052.09215  | 3591.87577   | 3698.078506 | 4337.541001 | -0.819660126 | 4.577637609 | 4.234239455  |
| Q5CC11 | TY-2482_chromosome | - | 1901326 | 1901631 | 1318.356802 | 1408.998878 | 1314.765053 | 1696.325249  | 1588.681402 | 1726.144282 | -0.330221545 | 2.397015404 | 2.157227591  |
| B7LDK7 | TY-2482_chromosome | - | 1901606 | 1902079 | 2433.025387 | 2285.754712 | 2422.273568 | 2721.528796  | 2698.646244 | 2964.292315 | -0.210479618 | 0.79841935  | 0.682321811  |
| B7LDK8 | TY-2482_chromosome | + | 1902211 | 1902690 | 2769.810643 | 3062.657321 | 2685.560503 | 2753.282894  | 2434.109323 | 2592.830101 | 0.09141084   | 0.360569227 | 0.298280762  |
| ssrA   | TY-2482_chromosome | + | 1902908 | 1903270 | 917260.7001 | 786644.4077 | 848619.1183 | 706038.6678  | 705699.5625 | 769990.8129 | 0.260948276  | 0.249650699 | 0.204588636  |
| B7LDK9 | TY-2482_chromosome | + | 1903476 | 1904714 | 1316.309768 | 1219.093415 | 1272.967213 | 1420.240175  | 1316.326    | 1434.711493 | -0.113955183 | 0.702487731 | 0.596833976  |
| B7LDL0 | TY-2482_chromosome | - | 1904859 | 1908602 | 541.9563832 | 564.3369859 | 687.4717193 | 701.2551262  | 955.5594139 | 988.252764  | -0.515955771 | 4.606774324 | 4.261838842  |
| B7LDL1 | TY-2482_chromosome | + | 1909070 | 1912918 | 4206.212514 | 3990.370032 | 4055.962002 | 4117.938851  | 4039.42977  | 4149.460254 | 0.003051661  | 0.011165793 | 0.008897932  |
| B7LDL2 | TY-2482_chromosome | + | 1912967 | 1913710 | 1064.667557 | 987.513283  | 1146.165435 | 1365.489219  | 1433.761863 | 1499.720382 | -0.387574961 | 4.376501206 | 4.042214459  |
| B7LDL5 | TY-2482_chromosome | - | 1914150 | 1915028 | 172.3069731 | 167.9456583 | 173.8186106 | 125.6213019  | 204.8577529 | 234.8556704 | -0.110699167 | 0.312823526 | 0.258593442  |
| B7LDL7 | TY-2482_chromosome | + | 1915867 | 1916211 | 101.801137  | 147.4879353 | 122.1545934 | 122.6704495  | 107.5871139 | 104.1054157 | 0.06885683   | 0.298603814 | 0.246438759  |
| C8TWQ4 | TY-2482_chromosome | + | 1916334 | 1917077 | 172.4489262 | 199.8747546 | 158.5068414 | 150.7912749  | 165.4599194 | 165.8767753 | 0.080422625  | 0.330132897 | 0.271314077  |
| B7LDL9 | TY-2482_chromosome | - | 1917053 | 1917649 | 13.12775656 | 15.3501017  | 13.03067767 | 24.62857402  | 19.24298142 | 31.24985322 | -0.891218547 | 1.58632908  | 1.400472052  |
| B7M996 | TY-2482_chromosome | + | 1917833 | 1918302 | 12.84987104 | 2.959836416 | 14.08076881 | 19.71139177  | 19.49322235 | 31.05259872 | -0.940893463 | 2.789692521 | 2.529009976  |
| D3H4R8 | TY-2482_chromosome | + | 1921190 | 1923440 | 29.46033122 | 29.24667305 | 32.87578811 | 53.63265497  | 100.8710666 | 86.44725818 | -1.368365204 | 6.315100652 | 5.907972837  |
| B7LDM7 | TY-2482_chromosome | + | 1923779 | 1924753 | 105.7825303 | 98.04928808 | 116.0645409 | 51.94264253  | 44.68850642 | 55.64732294 | 1.107419862  | 7.201084109 | 6.702115951  |
| B7LDM8 | TY-2482_chromosome | + | 1924776 | 1926041 | 332.171803  | 351.649055  | 398.9310721 | 91.36328964  | 87.83395362 | 75.82625067 | 2.096731352  | 41.12950341 | 40.25470306  |
| B7LDM9 | TY-2482_chromosome | + | 1926067 | 1927512 | 982.4632084 | 1174.048597 | 1116.251345 | 194.9841758  | 204.5069919 | 158.8792772 | 2.513133675  | 92.92085503 | 91.71534084  |
| B7LDN0 | TY-2482_chromosome | + | 1927529 | 1928806 | 1096.289314 | 1355.805465 | 1229.860203 | 174.5499342  | 184.7595079 | 146.5415933 | 2.812564309  | 115.9023686 | 114.5985457  |
| B7LE81 | TY-2482_chromosome | + | 1929120 | 1930517 | 138.1285998 | 125.7364984 | 143.4814588 | 108.0817364  | 105.0099746 | 73.35862013 | 0.527217642  | 2.200566487 | 1.97329008   |
| D3H4S4 | TY-2482_chromosome | + | 1930523 | 1931200 | 900.3662218 | 836.4966848 | 916.4898004 | 392.1760721  | 367.0971842 | 420.2504492 | 1.197246465  | 26.20044897 | 25.47205604  |
| B7LE82 | TY-2482_chromosome | - | 1931207 | 1931653 | 3411.659904 | 3367.743612 | 3478.270844 | 784.6521437  | 823.7959009 | 809.3344895 | 2.093221545  | 78.87383659 | 77.7366634   |
| Q1R837 | TY-2482_chromosome | + | 1931725 | 1931907 | 1253.729707 | 1382.594699 | 1429.299112 | 218.7886411  | 236.037575  | 225.0403072 | 2.575787867  | 119.3462505 | 118.0171917  |
| B7LE84 | TY-2482_chromosome | + | 1932078 | 1932374 | 171.9337086 | 174.7720188 | 141.3875591 | 173.6648496  | 205.5279255 | 201.8497531 | 0.784498892  | 0.93471877  | 0.804880608  |
| B7LE85 | TY-2482_chromosome | + | 1932387 | 1932908 | 396.40842   | 378.8106993 | 376.5536735 | 537.522648   | 521.8291742 | 534.032736  | -0.464702583 | 4.064210826 | 3.742695645  |
| B7LE86 | TY-2482_chromosome | - | 1932961 | 1933362 | 444.1293689 | 457.0947918 | 502.5251027 | 464.4777558  | 544.9110041 | 554.192272  | -0.135499413 | 0.671942583 | 0.568391953  |
| B7LE87 | TY-2482_chromosome | + | 1934030 | 1934476 | 539.483395  | 487.3191413 | 548.6523391 | 304.7780343  | 311.86786   | 360.1683299 | 0.727813213  | 7.850319646 | 7.400018335  |
| B7LE88 | TY-2482_chromosome | - | 1934519 | 1934860 | 333.247386  | 323.9320559 | 341.8529533 | 114.0061984  | 123.7522642 | 132.495211  | 1.448409968  | 22.5426115  | 21.85784524  |
| B7LE89 | TY-2482_chromosome | + | 1935000 | 1935338 | 2875.115697 | 4142.238375 | 3835.787262 | 424.1616     | 390.4018673 | 319.9256912 | 3.191003257  | 113.4203204 | 112.1336655  |
| B7LE91 | TY-2482_chromosome | + | 1935831 | 1936238 | 30.48911204 | 30.93466428 | 22.07127481 | 16.76472421  | 21.89018207 | 24.95014622 | 0.345298717  | 0.597658991 | 0.504042386  |
| B7LE92 | TY-2482_chromosome | + | 1936214 | 1938355 | 205.8778575 | 319.2036251 | 218.9057067 | 114.6601872  | 97.87174593 | 121.0635539 | 1.02917191   | 9.067560263 | 8.584658839  |
| B7LE93 | TY-2482_chromosome | + | 1938368 | 1939324 | 160.1078052 | 148.350734  | 117.1362783 | 67.08636198  | 61.26683982 | 69.26550024 | 1.075117017  | 8.042659744 | 7.586180599  |
| Q0TEJ8 | TY-2482_chromosome | + | 1939445 | 1939675 | 131.3696614 | 144.0786563 | 102.7720512 | 113.3976409  | 155.4318822 | 181.1812255 | -0.307458627 | 0.725424463 | 0.616876143  |
| B7LE94 | TY-2482_chromosome | + | 1939682 | 1940881 | 3691.297682 | 3569.355976 | 3956.488139 | 5411.793345  | 5581.234512 | 5624.091809 | -0.542376708 | 1.297455694 | 1.137000213  |
| B7LE95 | TY-2482_chromosome | + | 1940877 | 1941938 | 3458.070647 | 3035.720083 | 2987.280137 | 3113.506976  | 3149.570992 | 3147.153888 | 0.023318575  | 0.020793667 | 0.01608669   |
| B7LE96 | TY-2482_chromosome | + | 1941998 | 1942987 | 5703.60589  | 5971.633358 | 5989.674766 | 3102.518357  | 3193.517126 | 2843.779033 | 0.942668012  | 2.973277329 | 2.702813388  |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7LE97 | TY-2482_chromosome | + | 1943182 | 1944363 | 315.7913655 | 205.1949231 | 278.5968298 | 414.6219778 | 411.6201492 | 402.6855349 | -0.527946575 | 4.343057161 | 4.011018708  |
| B7LE99 | TY-2482_chromosome | + | 1944490 | 1945224 | 3391.621524 | 2893.807683 | 3228.278008 | 2860.722602 | 2633.428949 | 2916.279722 | 0.216589087  | 0.47107918  | 0.392523869  |
| B7LE98 | TY-2482_chromosome | + | 1945217 | 1945549 | 1002.894312 | 1037.493327 | 972.8587665 | 1016.085124 | 1098.843165 | 1214.129237 | -0.154058961 | 0.778387812 | 0.663991833  |
| B7LEA0 | TY-2482_chromosome | + | 1945643 | 1946170 | 2291.920913 | 2284.79507  | 2429.338741 | 2846.612783 | 3169.197889 | 3032.071137 | -0.355261238 | 1.60667058  | 1.419209014  |
| B7LEA2 | TY-2482_chromosome | + | 1946300 | 1947469 | 613.2136699 | 471.9981938 | 487.4425388 | 1204.274714 | 1537.548441 | 1300.316058 | -1.325631942 | 26.52285991 | 25.792027206 |
| B7LEA3 | TY-2482_chromosome | + | 1947489 | 1949024 | 974.9886709 | 912.9714654 | 932.5171571 | 995.2913974 | 1191.413951 | 1097.523807 | -0.206064034 | 1.386843674 | 1.2517127771 |
| B7LEA1 | TY-2482_chromosome | - | 1949094 | 1949606 | 6109.721525 | 5847.015891 | 6400.429348 | 4130.28097  | 4195.319081 | 4065.956921 | 0.588372125  | 1.268469453 | 1.111149685  |
| sraD   | TY-2482_chromosome | + | 1949674 | 1949748 | 988.6892797 | 976.2403821 | 1186.109774 | 631.5304641 | 619.9368786 | 665.0053804 | 0.75797289   | 10.49870663 | 9.983701896  |
| B7LEA4 | TY-2482_chromosome | - | 1949759 | 1951312 | 6584.654388 | 7098.64033  | 7041.350349 | 6958.878102 | 7134.225079 | 7103.698377 | -0.042033865 | 0.03760542  | 0.029881305  |
| B7LEA5 | TY-2482_chromosome | - | 1951388 | 1951813 | 1575.181512 | 1530.792198 | 1732.350208 | 1742.908253 | 1841.286991 | 1710.286991 | -0.10467722  | 0.644563765 | 0.544970287  |
| B7LEA6 | TY-2482_chromosome | - | 1951813 | 1952376 | 1774.816694 | 1588.4458   | 1880.326129 | 1849.100487 | 1921.268097 | 2058.710636 | -0.105671221 | 0.731710832 | 0.622715477  |
| D7Z1T1 | TY-2482_chromosome | - | 1952409 | 1952687 | 992.6415508 | 928.2352047 | 869.5842902 | 4248.035946 | 4875.143971 | 5161.394347 | -2.353791242 | 34.68166911 | 33.85787635  |
| argV   | TY-2482_chromosome | - | 1952657 | 1952733 | 922.6123919 | 855.5391408 | 770.5852387 | 3668.315755 | 4182.397639 | 4353.330845 | -2.264199747 | 36.21254276 | 35.37400675  |
| argV   | TY-2482_chromosome | - | 1952797 | 1952873 | 123.8392983 | 145.3810114 | 122.3896279 | 552.2687649 | 562.8662273 | 626.1116681 | -2.197971814 | 47.43996092 | 46.52056081  |
| argV   | TY-2482_chromosome | - | 1952937 | 1953013 | 41.05048045 | 48.23631599 | 45.91708567 | 149.8895137 | 153.6096522 | 184.4298908 | -1.869442366 | 16.97425251 | 16.35768521  |
| argV   | TY-2482_chromosome | - | 1953079 | 1953155 | 626.7437898 | 526.5313959 | 560.4631577 | 1763.826833 | 1742.717192 | 1957.063856 | -1.63831179  | 51.25269473 | 50.30338301  |
| argV   | TY-2482_chromosome | - | 1953220 | 1953296 | 283.3329993 | 202.1268651 | 237.2024586 | 924.028846  | 961.9213365 | 1085.693622 | -1.971935478 | 50.60565403 | 49.66401556  |
| Q83SY0 | TY-2482_chromosome | + | 1953359 | 1953726 | 8266.368091 | 7901.317458 | 3957.297929 | 12764.13807 | 18397.39388 | 17748.29657 | -1.382708132 | 3.236865013 | 2.952560408  |
| argV   | TY-2482_chromosome | - | 1953360 | 1953436 | 2078.081714 | 1889.003738 | 1678.681997 | 4774.236197 | 5914.84722  | 6864.026203 | -1.634397908 | 14.32776818 | 13.7487495   |
| serV   | TY-2482_chromosome | - | 1953440 | 1953532 | 8193.212001 | 7829.010551 | 3892.659525 | 12561.02229 | 18171.23669 | 17501.99121 | -1.378732811 | 3.22153961  | 2.938572326  |
| B7LEA8 | TY-2482_chromosome | - | 1954271 | 1956898 | 24380.22741 | 24111.69406 | 25230.31598 | 15773.76591 | 14745.24905 | 15117.04904 | 0.700688784  | 1.310591557 | 1.148622853  |
| B7LEB0 | TY-2482_chromosome | - | 1957029 | 1957526 | 414.1474624 | 364.9675399 | 399.376077  | 375.1510992 | 368.3592655 | 363.1012583 | -0.119198387 | 0.372199409 | 0.370494271  |
| B7LEB1 | TY-2482_chromosome | - | 1957772 | 1958830 | 18385.83276 | 17263.6655  | 18937.36376 | 17419.67509 | 15973.67293 | 17536.61526 | 0.125320921  | 0.111647451 | 0.088876259  |
| B7LEA9 | TY-2482_chromosome | - | 1958913 | 1959407 | 544.0293884 | 399.373373  | 571.2227333 | 484.1542001 | 517.9942304 | 497.1356337 | 0.107998853  | 0.08812828  | 0.069840795  |
| B7LEB2 | TY-2482_chromosome | - | 1959555 | 1960637 | 398.29819   | 415.249959  | 389.5231062 | 408.2549448 | 425.3974792 | 373.3489414 | -0.025325711 | 0.022933399 | 0.017857968  |
| B7LEB3 | TY-2482_chromosome | + | 1960893 | 1961453 | 377.0077333 | 382.1902679 | 353.6904804 | 1174.347361 | 1103.104783 | 1032.190554 | -1.592905114 | 42.99069198 | 42.10197711  |
| B7LEB4 | TY-2482_chromosome | + | 1961453 | 1962409 | 526.4898877 | 506.6432294 | 508.6901968 | 2150.669285 | 1878.307368 | 1808.815518 | -1.921507972 | 67.02936947 | 65.96355218  |
| B7LEB5 | TY-2482_chromosome | + | 1962423 | 1962791 | 212.7413106 | 187.5273842 | 213.9204497 | 1143.830818 | 1116.154311 | 878.3012814 | -2.32619275  | 63.98079766 | 62.9308831   |
| B7LEB6 | TY-2482_chromosome | + | 1962798 | 1963574 | 525.0223802 | 466.7909333 | 575.6666297 | 2647.802775 | 2569.304087 | 2400.505642 | -2.233606345 | 78.61994365 | 77.48396194  |
| B7LEB7 | TY-2482_chromosome | + | 1963682 | 1964038 | 111.3602701 | 161.7351048 | 118.1795057 | 421.8921926 | 467.026068  | 420.5207836 | -1.84684983  | 26.63358506 | 25.90004141  |
| B7LEB8 | TY-2482_chromosome | + | 1964108 | 1964878 | 1112.092982 | 1150.821548 | 1220.992873 | 1907.49599  | 1643.948671 | 1734.117197 | -0.596480614 | 7.915071944 | 7.462556723  |
| B7LEB9 | TY-2482_chromosome | + | 1964874 | 1965836 | 1674.175225 | 1661.979115 | 1701.057763 | 2777.272834 | 2470.694889 | 2551.278121 | -0.628031542 | 7.814688041 | 7.365611822  |
| B7LEC0 | TY-2482_chromosome | - | 1965839 | 1967350 | 854.7986587 | 844.166492  | 803.3521709 | 829.5906365 | 791.0810802 | 845.8602317 | 0.013683933  | 0.067682708 | 0.053175393  |
| B7LEC1 | TY-2482_chromosome | + | 1967537 | 1968973 | 64.14727698 | 48.15026599 | 49.21064269 | 38.62097394 | 41.84453213 | 46.91519708 | 0.376482594  | 0.790483895 | 0.674954284  |
| B7LEC2 | TY-2482_chromosome | + | 1968973 | 1970103 | 83.91699997 | 73.41352525 | 67.92442839 | 78.58874444 | 70.77299972 | 85.12487825 | -0.055121792 | 0.090018211 | 0.071080665  |
| B7LEC3 | TY-2482_chromosome | - | 1970335 | 1972584 | 877.6880322 | 856.8030199 | 880.7006668 | 1241.769259 | 888.707109  | 909.0335221 | -0.219135782 | 1.110470543 | 0.964985816  |
| B7LEC4 | TY-2482_chromosome | - | 1972740 | 1973264 | 39.16581109 | 49.61568922 | 34.91445574 | 54.6791035  | 63.75689867 | 71.97995483 | -0.698696989 | 1.910668057 | 1.7027734    |
| B7LEC5 | TY-2482_chromosome | - | 1973416 | 1974426 | 406.9508156 | 484.5944648 | 441.1327325 | 234.5696696 | 226.2043537 | 168.2572654 | 1.033309098  | 13.26492198 | 12.70336797  |
| B7LEC6 | TY-2482_chromosome | + | 1974683 | 1976137 | 81.43024256 | 79.63809383 | 87.46615225 | 102.1862624 | 100.6523192 | 99.32193152 | -0.266389807 | 0.81407758  | 0.695929329  |
| B7LEC7 | TY-2482_chromosome | + | 1976149 | 1977570 | 250.4895267 | 274.7176493 | 244.4847726 | 208.1197888 | 169.3837804 | 221.5900711 | 0.331790581  | 1.683352825 | 1.490558841  |
| B7LF78 | TY-2482_chromosome | - | 1977744 | 1978721 | 1128.519192 | 1248.619172 | 1251.248527 | 1449.615793 | 1441.693322 | 1457.561998 | -0.272077836 | 2.068852392 | 1.850009152  |
| B7LEC9 | TY-2482_chromosome | - | 1978969 | 1979451 | 163.7716924 | 172.7810417 | 127.1997001 | 300.5917949 | 289.8316196 | 288.5229095 | -0.98453811  | 8.337564663 | 7.872286197  |
| B7LED0 | TY-2482_chromosome | - | 1979459 | 1980229 | 214.0198454 | 265.204272  | 286.7790095 | 446.0567721 | 446.8762133 | 529.6710624 | -0.893441448 | 9.025544155 | 9.025744615  |
| B7LED1 | TY-2482_chromosome | - | 1980257 | 1980724 | 390.037784  | 339.278308  | 420.5371086 | 452.5167772 | 434.04267   | 457.2433309 | -0.171319912 | 1.032202228 | 0.893475207  |
| B7LED2 | TY-2482_chromosome | - | 1980720 | 1981127 | 150.0728031 | 148.9720392 | 87.49889367 | 161.7179554 | 171.274341  | 170.855835  | -0.467243524 | 1.366266813 | 1.199471154  |
| D3GRQ1 | TY-2482_chromosome | - | 1981127 | 1981891 | 108.0120537 | 90.40361236 | 81.01159642 | 126.4277996 | 139.8780441 | 140.1030004 | -0.536745057 | 2.385379361 | 2.146346449  |
| B7LED4 | TY-2482_chromosome | - | 1981894 | 1982433 | 53.9181944  | 33.1409991  | 35.00154391 | 40.38812666 | 41.31363223 | 35.97599258 | 0.101582897  | 0.075980428 | 0.060121713  |
| B7LED5 | TY-2482_chromosome | - | 1982446 | 1984152 | 129.885214  | 127.6522557 | 120.8921144 | 141.5155052 | 118.7273387 | 121.2382278 | -0.025087544 | 0.016885414 | 0.013180034  |
| B7LED6 | TY-2482_chromosome | - | 1984173 | 1985093 | 30.93275138 | 18.83705787 | 38.14738191 | 37.47037506 | 29.56663768 | 36.06250905 | -0.096291131 | 0.305785611 | 0.252048092  |
| B7LED7 | TY-2482_chromosome | - | 1985099 | 1986922 | 150.8892791 | 166.0705033 | 118.5899614 | 105.2557377 | 90.16470995 | 122.3524809 | 0.388604852  | 1.684078804 | 1.491089902  |
| B7LED8 | TY-2482_chromosome | - | 1986922 | 1987530 | 15.58847297 | 8.77525506  | 10.30990106 | 20.60135759 | 24.93324117 | 17.87374613 | -0.812498201 | 1.68604135  | 1.309427789  |
| B7LED9 | TY-2482_chromosome | - | 1987658 | 1988116 | 33.55596958 | 34.78655194 | 20.86104997 | 20.85818876 | 19.67422827 | 26.36283779 | 0.340289525  | 0.607746299 | 0.51300085   |
| B5Z389 | TY-2482_chromosome | + | 1988315 | 1988674 | 694.9323915 | 628.1975704 | 563.7431569 | 906.8636754 | 831.3402822 | 863.1438279 | -0.472275387 | 4.505490078 | 4.164959827  |
| B7LEE1 | TY-2482_chromosome | + | 1988681 | 1989550 | 3334.486993 | 2645.786842 | 3094.637035 | 5858.026135 | 4840.391151 | 5224.279915 | -0.761061315 | 3.53055612  | 3.232128256  |
| B7LEE2 | TY-2482_chromosome | + | 1989544 | 1989813 | 981.2774164 | 880.3896206 | 899.5467592 | 2022.200746 | 1909.556661 | 1829.677687 | -1.048347925 | 22.78493466 | 22.09568583  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LEE3</b> | TY-2482_chromosome | + | 1989816 | 1990934 | 2376.183373 | 2333.759397 | 2307.494711 | 6687.602612 | 6106.664111 | 6330.175343 | -1.448058877 | 6.118294138 | 5.717561229 |
| <b>B7LEE4</b> | TY-2482_chromosome | + | 1990976 | 1991941 | 1265.883237 | 1094.325194 | 1279.88677  | 4353.850861 | 3908.772558 | 3933.2594   | -1.70310793  | 23.34120386 | 22.64638981 |
| <b>B7LEE5</b> | TY-2482_chromosome | + | 1992018 | 1994093 | 523.6456915 | 590.2664856 | 514.6309369 | 2165.16197  | 2198.061149 | 2051.163136 | -2.020440575 | 71.8901962  | 70.79398161 |
| <b>B7LEE6</b> | TY-2482_chromosome | - | 1994136 | 1994486 | 106.131996  | 112.2713497 | 124.6497696 | 260.1745002 | 237.7957218 | 275.6800034 | -1.158078509 | 11.68242019 | 11.14611223 |
| <b>D7YDC0</b> | TY-2482_chromosome | + | 1994543 | 1994773 | 20.80638796 | 14.67373221 | 18.6948249  | 50.5242948  | 52.02960557 | 52.02022668 | -0.154200018 | 6.058770271 | 5.660438594 |
| <b>B7LEE7</b> | TY-2482_chromosome | + | 1994773 | 1997331 | 1683.074772 | 1275.090483 | 1578.784209 | 1855.742022 | 1844.396768 | 1631.958515 | -1.473005711 | 1.25056747  | 1.09412166  |
| <b>B7LEE8</b> | TY-2482_chromosome | + | 1997440 | 1998093 | 25.02109262 | 44.21045296 | 24.890762   | 41.82355819 | 42.36945002 | 41.8284725  | -0.577624282 | 0.829583982 | 0.709719375 |
| <b>B7LEE9</b> | TY-2482_chromosome | - | 1998150 | 1998944 | 585.580125  | 643.0273386 | 636.3842322 | 576.6625959 | 571.0886639 | 553.1840606 | 0.118632225  | 0.608444167 | 0.513530514 |
| <b>B7LEF0</b> | TY-2482_chromosome | + | 1999110 | 2000015 | 211.0996211 | 200.9547566 | 198.4199533 | 304.525197  | 362.1014127 | 350.9787471 | -0.730709519 | 6.598835977 | 6.185443115 |
| <b>B7LEF1</b> | TY-2482_chromosome | + | 2000015 | 2001274 | 310.2271782 | 266.4382778 | 315.8396784 | 643.5818331 | 781.3413434 | 760.3237634 | -1.241147258 | 22.71865914 | 22.0302602  |
| <b>B7LEF2</b> | TY-2482_chromosome | + | 2001274 | 2001909 | 157.4026563 | 128.3967248 | 160.6364763 | 275.4275327 | 273.5992077 | 214.9699861 | -0.725622752 | 5.319750523 | 4.943488385 |
| <b>B7LEF3</b> | TY-2482_chromosome | + | 2001917 | 2002690 | 252.2187522 | 174.2272617 | 197.1400123 | 278.2710276 | 285.2270716 | 247.1361695 | -0.323516841 | 1.714057239 | 1.519028433 |
| <b>B7LEF4</b> | TY-2482_chromosome | + | 2002782 | 2004143 | 142.5091905 | 124.4757101 | 123.8167734 | 146.7787611 | 127.5626023 | 166.9314289 | -0.157249244 | 0.463076897 | 0.386082488 |
| <b>B7LEF5</b> | TY-2482_chromosome | - | 2004189 | 2004422 | 26.83745876 | 27.99268632 | 12.41102436 | 26.76385085 | 20.89195423 | 23.89728775 | -0.20276155  | 0.078846768 | 0.062065626 |
| <b>B7LEF6</b> | TY-2482_chromosome | - | 2004436 | 2005860 | 64.35502048 | 56.18526883 | 49.32581726 | 69.11766765 | 61.59762514 | 71.62127616 | -0.258864717 | 0.555351747 | 0.465923993 |
| <b>B7LEF7</b> | TY-2482_chromosome | - | 2005863 | 2006453 | 20.677295   | 20.30414631 | 13.44077997 | 23.64243127 | 22.58335643 | 21.93170012 | -0.385952394 | 0.403062948 | 0.334809222 |
| <b>C8TFY8</b> | TY-2482_chromosome | + | 2006600 | 2007004 | 234.3708497 | 282.0718835 | 221.7196952 | 240.564154  | 227.0244767 | 253.9602829 | -0.033311443 | 0.026136636 | 0.020620877 |
| <b>B7LEF8</b> | TY-2482_chromosome | - | 2007131 | 2008120 | 4342.572583 | 6151.659627 | 5236.922207 | 5552.664282 | 6220.507495 | 5241.394082 | -0.190646668 | 0.148517571 | 0.129652862 |
| <b>B7LEG0</b> | TY-2482_chromosome | - | 2008186 | 2009322 | 4435.488282 | 6816.071473 | 5619.089497 | 1713.353526 | 2002.655186 | 1438.104389 | 1.611727563  | 14.42340637 | 13.84240309 |
| <b>B7LEG1</b> | TY-2482_chromosome | - | 2009465 | 2010088 | 2399.628847 | 2877.911919 | 2540.301899 | 1354.789991 | 1522.028282 | 1341.220038 | 0.842581298  | 13.76204532 | 13.19184676 |
| <b>B7LEG2</b> | TY-2482_chromosome | - | 2010085 | 2010843 | 3040.901883 | 2939.812475 | 2945.385599 | 1890.60163  | 1740.352736 | 1699.412982 | 0.744460013  | 5.206244485 | 4.836349512 |
| <b>B7LEG3</b> | TY-2482_chromosome | - | 2010827 | 2011873 | 3287.899898 | 3134.614355 | 3160.897561 | 2041.015163 | 2161.393518 | 1885.69722  | 0.658315547  | 4.153342565 | 3.830365726 |
| <b>B7LEG4</b> | TY-2482_chromosome | - | 2011873 | 2012349 | 1151.859033 | 1056.586038 | 1003.191238 | 955.5383711 | 969.6630755 | 818.3248731 | 0.22207933   | 1.450149978 | 1.276401338 |
| <b>B7LEG5</b> | TY-2482_chromosome | - | 2012352 | 2013059 | 1162.298347 | 1151.721066 | 1233.966028 | 1583.348805 | 1621.126764 | 1506.531244 | -0.396913369 | 4.243497279 | 3.916105719 |
| <b>B7LEG6</b> | TY-2482_chromosome | - | 2013081 | 2013389 | 1063.267687 | 1132.156477 | 1106.289771 | 1473.403578 | 1620.151941 | 1706.100951 | -0.54662016  | 6.777561113 | 6.359864907 |
| <b>B7LEG7</b> | TY-2482_chromosome | - | 2013586 | 2013906 | 363.380353  | 491.4122553 | 402.4883439 | 65.19398351 | 58.78023976 | 64.53838988 | 2.659733465  | 59.84747342 | 58.8967278  |
| <b>B7LEG8</b> | TY-2482_chromosome | - | 2013959 | 2014561 | 1889.652503 | 2465.355637 | 2185.286034 | 89.12202821 | 80.48459299 | 73.12769977 | 4.688510573  | 268.6361161 | 266.8011644 |
| <b>B7LEG9</b> | TY-2482_chromosome | - | 2014564 | 2015988 | 8032.546362 | 8227.003703 | 8029.964162 | 278.3664001 | 296.9435959 | 328.2979997 | 4.746140021  | 80.36763461 | 79.22445448 |
| <b>B7LEH0</b> | TY-2482_chromosome | - | 2015993 | 2016898 | 5023.804882 | 4817.86829  | 4880.637559 | 112.0727791 | 111.9788176 | 112.2957445 | 5.457808018  | 160.3430917 | 158.8295085 |
| <b>B7LEH1</b> | TY-2482_chromosome | + | 2017150 | 2018184 | 369.6820653 | 475.7312407 | 391.0526214 | 527.9665224 | 532.2017888 | 594.8014039 | -0.485119643 | 3.135955469 | 2.857306254 |
| <b>B7LEH2</b> | TY-2482_chromosome | - | 2018458 | 2018748 | 65.24217267 | 78.38545989 | 62.10998018 | 61.79043935 | 77.9959997  | 77.66179846 | -0.136138328 | 0.173069727 | 0.139719044 |
| <b>B7LEH3</b> | TY-2482_chromosome | - | 2018751 | 2019668 | 122.1146039 | 101.9060948 | 147.250155  | 149.5096248 | 154.0379679 | 123.0564776 | -0.127935714 | 0.491176342 | 0.409515431 |
| <b>B7LEH4</b> | TY-2482_chromosome | - | 2019668 | 2020453 | 160.4429644 | 158.64942   | 128.4842401 | 128.9401637 | 136.3603851 | 115.0032446 | 0.194285735  | 0.682520369 | 0.578638343 |
| <b>B7LEH5</b> | TY-2482_chromosome | - | 2021057 | 2022109 | 191.9544246 | 199.4735647 | 195.4287024 | 197.5767289 | 202.0336482 | 183.3202461 | -0.001916541 | 0.012472041 | 0.009766691 |
| <b>B7LEH6</b> | TY-2482_chromosome | - | 2022124 | 2022657 | 92.78240299 | 82.5446736  | 104.4652011 | 99.74849387 | 76.91841603 | 85.47092111 | 0.1039430466 | 0.211880028 | 0.172550628 |
| <b>B7LEH7</b> | TY-2482_chromosome | - | 2022657 | 2024285 | 195.6114629 | 167.1559102 | 140.1118923 | 153.0475582 | 138.0641267 | 149.2120199 | 0.179318703  | 0.560005698 | 0.469936129 |
| <b>B7LEH8</b> | TY-2482_chromosome | - | 2024317 | 2027013 | 286.6270301 | 306.5098073 | 337.243302  | 147.4219772 | 107.9169281 | 146.8985545 | 1.221519924  | 14.1335102  | 13.55777915 |
| <b>P11901</b> | TY-2482_chromosome | - | 2027370 | 2028479 | 497.3627654 | 530.0876007 | 458.7055242 | 0.273396973 | 0.307167065 | 1.023617934 | 9.595719566  | 174.7784142 | 173.2136785 |
| <b>D3QPV9</b> | TY-2482_chromosome | - | 2028559 | 2028844 | 97.05212404 | 97.13274968 | 75.34585659 | 85.8156826  | 91.90636183 | 76.33425185 | 0.036913744  | 0.132891194 | 0.107176245 |
| <b>B7LEI1</b> | TY-2482_chromosome | - | 2028976 | 2029707 | 4078.327491 | 3992.339131 | 4670.322261 | 101.7376941 | 102.4428365 | 120.7473248 | 5.330313303  | 302.5458303 | 300.5957438 |
| <b>B7LEI2</b> | TY-2482_chromosome | - | 2029784 | 2031493 | 10730.38341 | 10190.47012 | 10551.35327 | 194.9032419 | 176.5622261 | 161.9619355 | 5.88838247   | 56.72831831 | 55.75020303 |
| <b>B7LEI3</b> | TY-2482_chromosome | - | 2031496 | 2033292 | 7773.511097 | 7035.049269 | 6931.048043 | 176.8203431 | 169.6840683 | 145.7273893 | 5.466476788  | 117.3705706 | 116.0579022 |
| <b>B7LEI4</b> | TY-2482_chromosome | + | 2033608 | 2033970 | 276.8000286 | 205.9850228 | 221.5777197 | 542.0158746 | 678.9073373 | 690.1364524 | -1.388534276 | 21.99065743 | 21.31522347 |
| <b>B7LEI5</b> | TY-2482_chromosome | + | 2034051 | 2035319 | 721.5741093 | 737.2079574 | 669.8269863 | 1456.792947 | 1209.578854 | 1270.41022  | -0.911959052 | 15.15100399 | 14.55619103 |
| <b>B7LEI6</b> | TY-2482_chromosome | + | 2035313 | 2035570 | 122.8017665 | 81.52052522 | 116.129967  | 254.0207114 | 186.1794752 | 215.7967114 | -0.94398555  | 7.22694255  | 6.795369941 |
| <b>B7LEI8</b> | TY-2482_chromosome | + | 2035590 | 2036162 | 167.8413994 | 191.6360497 | 178.1962474 | 383.3107263 | 355.4975745 | 305.8444734 | -0.994411247 | 9.904609924 | 9.401127105 |
| <b>B7LEI7</b> | TY-2482_chromosome | - | 2036316 | 2037173 | 83.22872048 | 108.333719  | 76.67253254 | 63.95195975 | 62.09609972 | 76.65705662 | 0.329332681  | 1.160055946 | 1.010293626 |
| <b>B7LEI9</b> | TY-2482_chromosome | - | 2037173 | 2037949 | 40.54935836 | 52.4604848  | 29.50671385 | 30.02975948 | 25.87415566 | 23.48914398 | 0.495235607  | 1.378838556 | 1.210763677 |
| <b>B7LEJ0</b> | TY-2482_chromosome | - | 2037930 | 2039264 | 40.61422968 | 42.95673394 | 37.57621842 | 21.90307343 | 25.28214861 | 18.30343294 | 0.848201323  | 2.55402098  | 2.304452724 |
| <b>B7LEJ1</b> | TY-2482_chromosome | - | 2039361 | 2040812 | 74.48671432 | 60.38913214 | 73.14886856 | 59.8094796  | 44.73149402 | 62.2166515  | 0.369803346  | 0.853717258 | 0.731438301 |
| <b>B7LEJ3</b> | TY-2482_chromosome | + | 2041986 | 2043260 | 222.0167072 | 331.2452845 | 230.4103289 | 199.938948  | 236.5173602 | 238.796418  | 0.097824205  | 0.587145851 | 0.494284072 |
| <b>B7LEJ4</b> | TY-2482_chromosome | + | 2043290 | 2044765 | 263.3250121 | 308.6570007 | 220.5838954 | 202.3136023 | 204.9146149 | 278.4390421 | 0.137757038  | 0.614565546 | 0.518568054 |
| <b>E7J7X4</b> | TY-2482_chromosome | + | 2045408 | 2045986 | 213.2407406 | 263.9755508 | 195.9716995 | 293.2778759 | 263.6995047 | 317.2394067 | -0.456239558 | 2.028068978 | 1.811953097 |
| <b>B7LEJ5</b> | TY-2482_chromosome | - | 2046327 | 2046995 | 1788.590589 | 2156.283768 | 1965.491585 | 1782.92656  | 1880.314903 | 1903.342962 | 0.048157479  | 0.330993013 | 0.27379575  |
| <b>C8TG25</b> | TY-2482_chromosome | + | 2047288 | 2048157 | 16.46092532 | 25.63205507 | 13.41508302 | 26.94127988 | 35.89397856 | 29.73864407 | -0.878645455 | 1.45712822  | 1.283119962 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>Q8FE68</b> | TY-2482_chromosome | + | 2048175 | 2049401 | 78134.84429 | 71179.03604 | 78129.26547 | 43446.48053 | 38992.70135 | 40491.01896 | 0.913494747  | 1.748776512 | 1.551287108 |
| <b>B7LEK0</b> | TY-2482_chromosome | - | 2049609 | 2051243 | 22925.10128 | 21073.69874 | 21413.15692 | 16686.49304 | 16872.13921 | 16367.38328 | 0.401613739  | 0.575997895 | 0.48442706  |
| <b>B7LEK1</b> | TY-2482_chromosome | - | 2051474 | 2052262 | 1458.782929 | 1709.225845 | 1756.790646 | 1720.548244 | 1710.654392 | 1735.64798  | -0.080791736 | 0.281365557 | 0.231841193 |
| <b>B7LEJ9</b> | TY-2482_chromosome | - | 2052336 | 2052868 | 725.8049352 | 869.7732912 | 881.836469  | 960.6051343 | 900.1858803 | 942.8752003 | -0.195952607 | 1.029129679 | 0.890642071 |
| <b>Q1R7R0</b> | TY-2482_chromosome | + | 2052585 | 2052944 | 988.6965923 | 1076.921087 | 1093.190162 | 1189.503998 | 1160.476836 | 1191.484913 | -0.171465706 | 1.011126096 | 0.873714214 |
| <b>B7LEK2</b> | TY-2482_chromosome | - | 2052997 | 2055228 | 6048.516808 | 6875.291168 | 6752.5135   | 8203.877608 | 7740.39759  | 7605.742334 | -0.27985172  | 0.388480163 | 0.321141705 |
| <b>B7LEK4</b> | TY-2482_chromosome | - | 2055279 | 2056577 | 1769.445071 | 2267.17956  | 2156.333073 | 1695.488451 | 1660.694318 | 1679.435132 | 0.259958039  | 1.950049318 | 1.739054558 |
| <b>C8UAB8</b> | TY-2482_chromosome | + | 2056634 | 2059387 | 1867.543717 | 1796.594952 | 1917.913444 | 3185.22677  | 3054.650578 | 3005.17625  | -0.713158055 | 5.019042365 | 4.655623478 |
| <b>B7LEW6</b> | TY-2482_chromosome | - | 2059625 | 2060962 | 315.2233987 | 306.3138724 | 304.685804  | 412.3652798 | 391.3118123 | 394.8920327 | -0.371449805 | 2.481308314 | 2.23696333  |
| <b>C8TG35</b> | TY-2482_chromosome | - | 2060986 | 2062323 | 267.6881187 | 235.8998894 | 238.7061895 | 344.4998072 | 364.7635933 | 357.241479  | -0.506375425 | 3.887078598 | 3.574588981 |
| <b>B7LEW9</b> | TY-2482_chromosome | - | 2062328 | 2063677 | 243.8824708 | 177.0428787 | 168.7840202 | 389.7890244 | 349.5643875 | 367.313905  | -0.881144527 | 8.271410325 | 7.808411625 |
| <b>B7LEX0</b> | TY-2482_chromosome | - | 2064115 | 2064561 | 2003.553832 | 1699.457649 | 1895.006991 | 1974.464058 | 1850.536804 | 1994.514416 | -0.017264664 | 0.192010287 | 0.155643003 |
| <b>B7LEX1</b> | TY-2482_chromosome | - | 2064582 | 2065361 | 457.6707904 | 372.0073869 | 412.4114847 | 732.3745761 | 778.9830995 | 747.1085909 | -0.821765486 | 12.24389914 | 11.69852416 |
| <b>B7LEW7</b> | TY-2482_chromosome | - | 2065364 | 2065690 | 238.5714937 | 213.7266604 | 221.3676147 | 294.0551909 | 305.7239236 | 335.1142534 | -0.4507171   | 3.07507378  | 2.799717184 |
| <b>csrB</b>   | TY-2482_chromosome | - | 2065733 | 2066092 | 29354.5171  | 57743.82851 | 48539.57776 | 50381.87822 | 41793.34023 | 45054.31413 | -0.135441761 | 0.015257552 | 0.011851303 |
| <b>B7LEX3</b> | TY-2482_chromosome | - | 2066315 | 2066857 | 1225.453544 | 1216.638609 | 1182.572521 | 801.0072742 | 890.4799275 | 934.9649866 | 0.464985877  | 5.179992318 | 4.811115621 |
| <b>B7LEX4</b> | TY-2482_chromosome | + | 2066925 | 2067770 | 1449.622754 | 1384.441978 | 1380.822302 | 1379.230764 | 1284.546291 | 1337.38463  | 0.078962556  | 0.349090314 | 0.289005378 |
| <b>B7LEX5</b> | TY-2482_chromosome | + | 2067885 | 2069246 | 11102.88532 | 11487.96446 | 11302.79069 | 11450.28121 | 10950.84991 | 10830.78125 | 0.07865785   | 0.030812783 | 0.024058001 |
| <b>B7LEX2</b> | TY-2482_chromosome | + | 2069806 | 2071092 | 7748.939134 | 6526.406297 | 6897.896383 | 11560.73789 | 10651.28169 | 9954.360013 | -0.578791245 | 1.197191065 | 1.044594638 |
| <b>B7LEX7</b> | TY-2482_chromosome | + | 2071153 | 2072517 | 3960.585586 | 3487.300246 | 3795.812705 | 3706.395802 | 3818.491445 | 3782.483836 | 0.022243603  | 0.014371338 | 0.01114042  |
| <b>C8UAD0</b> | TY-2482_chromosome | + | 2072542 | 2073384 | 516.2296657 | 457.3948673 | 440.001491  | 698.5012152 | 725.9812109 | 597.7581053 | -0.515525454 | 4.630497582 | 4.284791392 |
| <b>B7LEX9</b> | TY-2482_chromosome | - | 2073445 | 2074593 | 175.9120586 | 206.460471  | 176.9556033 | 335.2362604 | 288.0438551 | 265.4401467 | -0.723196747 | 5.068665427 | 4.704039607 |
| <b>B7LEX8</b> | TY-2482_chromosome | - | 2074621 | 2075265 | 44.07959413 | 45.11956124 | 47.31501499 | 69.99762413 | 65.17630997 | 53.57464789 | -0.472761746 | 1.272636027 | 1.11456575  |
| <b>B7LEY1</b> | TY-2482_chromosome | + | 2075812 | 2077125 | 158.5273838 | 130.9555103 | 131.0748792 | 342.7869739 | 283.4735145 | 242.0805124 | -1.036814382 | 8.913169946 | 8.434217878 |
| <b>B7LEY2</b> | TY-2482_chromosome | + | 2077161 | 2078933 | 620.7747838 | 570.0942529 | 629.1443157 | 1277.104157 | 1144.08556  | 1084.165449 | -0.923686347 | 17.12726042 | 16.50816708 |
| <b>B7LEY0</b> | TY-2482_chromosome | + | 2079015 | 2080460 | 425.3222159 | 335.1267955 | 414.9839474 | 666.6732356 | 607.6772734 | 631.0997934 | -0.626371059 | 7.444175115 | 7.004537821 |
| <b>B7LEY4</b> | TY-2482_chromosome | + | 2080465 | 2080884 | 320.4144648 | 303.88846   | 358.7682016 | 442.3397961 | 406.6030001 | 361.650605  | -0.271212441 | 1.559653908 | 1.377253175 |
| <b>B7LEY5</b> | TY-2482_chromosome | + | 2080945 | 2081673 | 540.0444275 | 567.3341937 | 604.600392  | 690.3745791 | 638.5401691 | 603.1241678 | -0.172263868 | 0.890668286 | 0.764800577 |
| <b>B7LEY3</b> | TY-2482_chromosome | - | 2081723 | 2082820 | 993.3545771 | 1080.798552 | 1001.550133 | 909.7941067 | 1059.797047 | 898.2451273 | 0.074847395  | 0.431532123 | 0.359700572 |
| <b>B7LEY7</b> | TY-2482_chromosome | - | 2082816 | 2083208 | 338.9293862 | 457.5717293 | 363.787997  | 257.1522583 | 217.6808669 | 230.4899126 | 0.632935295  | 5.820448726 | 5.427740462 |
| <b>B7LEY8</b> | TY-2482_chromosome | - | 2083230 | 2084144 | 544.7931377 | 648.3536033 | 507.6975744 | 791.0316899 | 950.2101659 | 852.4961341 | -0.676272879 | 6.677655556 | 6.277176484 |
| <b>gcvB</b>   | TY-2482_chromosome | + | 2084273 | 2084478 | 35333.28109 | 48964.80104 | 20863.28743 | 31522.85509 | 46242.7261  | 33546.53165 | -0.29609859  | 0.077361883 | 0.061142084 |
| <b>B7N743</b> | TY-2482_chromosome | + | 2084439 | 2084752 | 685.7758363 | 1003.192512 | 919.2369834 | 1277.432525 | 1419.175403 | 1497.577817 | -0.740961766 | 7.62846693  | 7.182802694 |
| <b>B7LEZ0</b> | TY-2482_chromosome | + | 2084914 | 2086116 | 2977.588891 | 2764.603823 | 3083.010703 | 3125.630782 | 3280.077072 | 3384.008129 | -0.118345088 | 0.378011368 | 0.31265215  |
| <b>B7LEY6</b> | TY-2482_chromosome | + | 2086119 | 2086559 | 1230.189411 | 1194.603636 | 1146.732966 | 1124.496991 | 1234.783035 | 1170.676401 | -0.013331954 | 0.059355355 | 0.047270013 |
| <b>B7LEZ2</b> | TY-2482_chromosome | - | 2086616 | 2087419 | 1168.043809 | 966.6680662 | 1090.448271 | 1398.146894 | 1528.389522 | 1517.071243 | -0.417577196 | 4.833775874 | 4.478515794 |
| <b>B7LEZ1</b> | TY-2482_chromosome | - | 2087499 | 2088593 | 969.3356694 | 1151.076956 | 1047.447055 | 1390.867097 | 1589.025408 | 1507.29781  | -0.538987819 | 5.782971099 | 5.391090138 |
| <b>metV</b>   | TY-2482_chromosome | + | 2088802 | 2088878 | 1467.539266 | 1077.16434  | 1000.764699 | 8828.013468 | 12759.12702 | 16150.2522  | -3.367228046 | 19.6159334  | 18.96958274 |
| <b>metV</b>   | TY-2482_chromosome | + | 2088912 | 2088988 | 2880.88068  | 1787.198059 | 1838.383137 | 17915.3684  | 25705.99129 | 34601.78296 | -3.50493028  | 17.59852185 | 16.97323202 |
| <b>metV</b>   | TY-2482_chromosome | + | 2089021 | 2089097 | 845.1652785 | 537.9079777 | 378.108992  | 5279.964465 | 7912.806678 | 11063.14978 | -3.751371375 | 22.54374142 | 21.85830407 |
| <b>B7LEZ4</b> | TY-2482_chromosome | - | 2089174 | 2090424 | 804.5094276 | 852.1889627 | 731.7284137 | 2623.683279 | 2814.915624 | 2744.336749 | -1.81130915  | 52.22666352 | 51.27111407 |
| <b>B7LEZ5</b> | TY-2482_chromosome | + | 2090656 | 2091984 | 395.8359868 | 311.6899705 | 354.917741  | 361.8691383 | 357.3792815 | 366.0310346 | 0.0176012    | 0.046233065 | 0.03637831  |
| <b>B7LEZ6</b> | TY-2482_chromosome | - | 2092052 | 2093875 | 2025.052808 | 1772.413454 | 2133.172784 | 1306.962391 | 1307.853762 | 1203.520151 | 0.682256881  | 8.096104107 | 7.638628302 |
| <b>B7LEZ3</b> | TY-2482_chromosome | - | 2093878 | 2097417 | 3953.216094 | 4292.700963 | 4179.436636 | 3602.808199 | 3347.080593 | 3237.070648 | 0.268317101  | 0.875681557 | 0.750974754 |
| <b>B7LEZ8</b> | TY-2482_chromosome | - | 2097413 | 2100298 | 2355.522248 | 2521.491025 | 2545.771619 | 2789.422884 | 2911.378156 | 2819.293245 | -0.204607708 | 0.651207439 | 0.550189145 |
| <b>B7LEZ9</b> | TY-2482_chromosome | - | 2100477 | 2103842 | 2709.170612 | 2540.324617 | 2537.4179   | 3087.373655 | 2938.284308 | 3046.817184 | -0.213540351 | 0.743937669 | 0.633194558 |
| <b>B7LEZ7</b> | TY-2482_chromosome | - | 2103858 | 2104178 | 128.4723927 | 132.5948107 | 126.5457286 | 159.6142949 | 126.0682862 | 153.0757638 | -0.307049558 | 1.083925512 | 0.941108153 |
| <b>B7LF01</b> | TY-2482_chromosome | - | 2104166 | 2104570 | 104.117262  | 109.7737438 | 102.1519736 | 120.5276029 | 108.9716675 | 127.8888207 | -0.19462901  | 0.492628645 | 0.410724541 |
| <b>A1AF37</b> | TY-2482_chromosome | - | 2104570 | 2105370 | 91.28431704 | 86.77301469 | 104.4936396 | 124.5844813 | 124.7153224 | 116.1766921 | -0.338046917 | 1.300101568 | 1.139394248 |
| <b>Q0TE06</b> | TY-2482_chromosome | + | 2105580 | 2105780 | 127.2717354 | 164.3464311 | 125.4010739 | 123.9387294 | 147.3707864 | 133.8766215 | -0.038216087 | 0.039034499 | 0.03113372  |
| <b>B7LF04</b> | TY-2482_chromosome | - | 2105779 | 2106570 | 2943.261346 | 2800.936016 | 2761.56589  | 2828.744153 | 2923.696236 | 2628.36563  | 0.02148334   | 0.046931699 | 0.036931699 |
| <b>B7LF05</b> | TY-2482_chromosome | - | 2106580 | 2107452 | 2161.52206  | 1986.391734 | 2136.353353 | 2739.032267 | 2934.946951 | 2830.840269 | -0.412803372 | 2.101786065 | 1.880487954 |
| <b>B7LF06</b> | TY-2482_chromosome | - | 2107606 | 2109849 | 8736.36617  | 8866.720236 | 8983.838948 | 5191.846295 | 4783.024451 | 4498.848797 | 0.873303602  | 2.296099978 | 2.063208253 |
| <b>B7LF07</b> | TY-2482_chromosome | - | 2109865 | 2110392 | 5441.649185 | 5614.79252  | 5172.490653 | 2752.153787 | 2648.794767 | 2727.305661 | 0.977894952  | 6.792550409 | 6.374398729 |
| <b>E4P678</b> | TY-2482_chromosome | + | 2110704 | 2110895 | 40.54676784 | 67.93979187 | 71.11724975 | 35.13705624 | 30.97413083 | 37.60262203 | 0.75460206   | 2.544503326 | 2.295552843 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7LF08 | TY-2482_chromosome | + | 2111077 | 2111763 | 509.2699351 | 575.5381115 | 558.8175191 | 498.745952  | 532.4853604 | 554.5630574 | 0.035384493  | 0.159492889 | 0.12832841   |
| B7LF09 | TY-2482_chromosome | + | 2111835 | 2112545 | 400.7462768 | 332.015379  | 349.325629  | 851.059464  | 972.6605651 | 1071.514263 | -1.382663486 | 29.18798324 | 28.42672477  |
| Q1R7H9 | TY-2482_chromosome | - | 2112623 | 2112907 | 1269.021626 | 1216.316137 | 1116.727226 | 761.9113634 | 855.3095656 | 877.7968555 | 0.523133271  | 6.269732769 | 5.864378492  |
| B7LF11 | TY-2482_chromosome | + | 2113012 | 2114049 | 3197.230459 | 3244.892575 | 3324.52005  | 2740.51357  | 2480.416927 | 2523.631129 | 0.335128875  | 1.222242573 | 1.06952142   |
| B7LF12 | TY-2482_chromosome | - | 2114087 | 2115277 | 809.3613002 | 794.9550221 | 787.4261786 | 463.6946522 | 426.5814072 | 411.6835406 | 0.873402632  | 15.00231127 | 14.41022759  |
| B7LF13 | TY-2482_chromosome | - | 2115273 | 2117429 | 1284.300982 | 1274.586975 | 1417.731351 | 1365.718793 | 1357.633976 | 1209.355847 | 0.03280795   | 0.066391133 | 0.052333531  |
| E6AX10 | TY-2482_chromosome | + | 2117526 | 2117819 | 19.05350957 | 16.69224697 | 13.30424192 | 17.94770296 | 21.13289051 | 20.80429698 | -0.310185625 | 0.341743684 | 0.283055194  |
| B7LF02 | TY-2482_chromosome | + | 2118015 | 2119043 | 1643.392202 | 1672.496446 | 1696.73476  | 1308.608383 | 1156.569204 | 1135.380212 | 0.473450723  | 5.443890783 | 5.063052703  |
| B7LF15 | TY-2482_chromosome | - | 2119056 | 2120315 | 633.8822172 | 664.2077026 | 592.2604675 | 395.8438243 | 352.0891749 | 365.4047018 | 0.733820476  | 10.11550389 | 9.605595242  |
| B7LF16 | TY-2482_chromosome | + | 2120437 | 2121369 | 478.7167666 | 383.3350971 | 423.9403289 | 385.5000386 | 407.0241029 | 419.136131  | 0.130088655  | 0.346945794 | 0.542459884  |
| B7LF17 | TY-2482_chromosome | - | 2121362 | 2122051 | 331.088111  | 409.6542187 | 444.789618  | 462.6998958 | 419.6083482 | 452.152402  | -0.176836357 | 0.715420691 | 0.608099349  |
| B7LF18 | TY-2482_chromosome | - | 2122183 | 2123598 | 649.7617814 | 627.0353417 | 565.060854  | 1967.416795 | 1978.706578 | 1747.06888  | -1.647501408 | 49.97783592 | 49.04298933  |
| B7LF19 | TY-2482_chromosome | - | 2123964 | 2124722 | 248.1668179 | 376.0025967 | 271.9554786 | 50545.48475 | 44138.45076 | 42901.2488  | -7.383600368 | 51.43600376 | 50.48436338  |
| B7LF20 | TY-2482_chromosome | - | 2124755 | 2125588 | 212.6528627 | 205.4138692 | 191.3804816 | 72436.13632 | 65031.02118 | 59388.7528  | -9.351026733 | 60.6160205  | 59.65493255  |
| B7LF21 | TY-2482_chromosome | - | 2125878 | 2127056 | 553.0381929 | 655.2019752 | 547.7339684 | 1109.813317 | 988.2911099 | 985.8375326 | -0.871623223 | 12.52896448 | 11.97990902  |
| B7LF14 | TY-2482_chromosome | + | 2127311 | 2128537 | 731.3344792 | 701.6101863 | 724.1143841 | 2047.849703 | 2243.517318 | 2131.499626 | -1.562838225 | 48.85835598 | 47.9287195   |
| B7LF23 | TY-2482_chromosome | + | 2129000 | 2129629 | 26.29875164 | 34.38884442 | 26.08808784 | 31.38552182 | 48.34152268 | 50.40544204 | -0.645879093 | 1.327359497 | 1.163872279  |
| B7LF22 | TY-2482_chromosome | + | 2129966 | 2130772 | 312.4087687 | 332.7827101 | 334.6701581 | 158.398968  | 197.7872987 | 184.2399219 | 0.855544347  | 9.006812121 | 8.525231184  |
| B7LF25 | TY-2482_chromosome | + | 2130768 | 2131247 | 50.09292281 | 49.05131515 | 42.02751071 | 17.63495861 | 41.40987383 | 39.46546445 | 0.511933686  | 1.131981657 | 0.984790945  |
| B7LF27 | TY-2482_chromosome | + | 2133559 | 2134932 | 11.42797593 | 11.51101723 | 11.51608801 | 9.127421933 | 20.11202776 | 39.50547004 | -0.960176867 | 1.591375512 | 1.405251473  |
| Q3SBB5 | TY-2482_chromosome | - | 2144395 | 2145414 | 12.33373949 | 23.48277508 | 21.24841164 | 19.0038503  | 43.90033625 | 34.76530315 | -0.832571659 | 1.528368994 | 1.348345069  |
| B7LF50 | TY-2482_chromosome | - | 2145549 | 2147198 | 58.9016232  | 83.88206104 | 52.35957376 | 141.6422664 | 241.4268639 | 241.233979  | -1.786677033 | 11.88936016 | 11.351953192 |
| glyU   | TY-2482_chromosome | - | 2147390 | 2147463 | 54.04380833 | 74.6481938  | 50.76676251 | 106.4621963 | 116.2779234 | 98.03228609 | -0.944992294 | 4.0203468   | 3.701377741  |
| B7LF51 | TY-2482_chromosome | - | 2147545 | 2148297 | 1304.926457 | 1277.315036 | 1192.785064 | 1461.977441 | 1418.86339  | 1510.214061 | -0.22718239  | 1.521269463 | 1.34190346   |
| E6BGA4 | TY-2482_chromosome | - | 2148297 | 2148485 | 174.1461382 | 178.3868741 | 185.2215066 | 115.6664741 | 104.2824802 | 127.1080271 | 0.638561308  | 3.931193227 | 3.616374947  |
| B7LF45 | TY-2482_chromosome | + | 2148751 | 2151006 | 268.3561185 | 320.0462189 | 237.7016752 | 258.069531  | 285.3784599 | 266.6689856 | 0.00545047   | 0.175590384 | 0.141957783  |
| B7LF53 | TY-2482_chromosome | + | 2151020 | 2151895 | 101.6839095 | 77.42883666 | 87.7718942  | 95.19317948 | 86.9843205  | 90.63097938 | 0.01273871   | 0.021360581 | 0.016549132  |
| B7LF54 | TY-2482_chromosome | + | 2151895 | 2152371 | 57.20819111 | 57.47844787 | 65.79775757 | 85.54347804 | 92.9648819  | 107.4512841 | -0.63634007  | 2.705371425 | 2.448477734  |
| B7LF52 | TY-2482_chromosome | - | 2152417 | 2154192 | 1111.998882 | 1235.110445 | 1093.618069 | 1288.395972 | 1175.939419 | 1407.930173 | -0.202761422 | 1.018742952 | 0.88097279   |
| B7LF55 | TY-2482_chromosome | + | 2154668 | 2155855 | 41.01289083 | 44.63706221 | 47.22302143 | 56.27416381 | 42.14687523 | 46.26827808 | -0.129904609 | 0.19461452  | 0.157513612  |
| B7LF57 | TY-2482_chromosome | + | 2155916 | 2157109 | 139.1162519 | 151.0591947 | 105.5610369 | 153.2944005 | 137.5792597 | 176.8767614 | -0.381580511 | 1.352681464 | 1.187161266  |
| B7LF58 | TY-2482_chromosome | + | 2157170 | 2158378 | 88.48101597 | 132.2295538 | 86.77234135 | 103.5363394 | 91.37865759 | 103.7668792 | -0.084656964 | 0.018189043 | 0.013905077  |
| B7LF59 | TY-2482_chromosome | + | 2158434 | 2159816 | 70.26186987 | 80.9246783  | 74.74360105 | 73.03295377 | 54.64227123 | 62.01115996 | 0.217208688  | 0.568387348 | 0.477353275  |
| B7LF60 | TY-2482_chromosome | + | 2159867 | 2160796 | 138.2901955 | 143.8079386 | 139.4227805 | 136.5389757 | 130.2872261 | 134.8869613 | 0.058108188  | 0.148423364 | 0.119651621  |
| B7LF61 | TY-2482_chromosome | - | 2160843 | 2162465 | 180.8633656 | 198.990603  | 199.5782198 | 551.831121  | 405.9807013 | 562.5955974 | -1.437239534 | 22.5203406  | 21.83573918  |
| B7LF56 | TY-2482_chromosome | - | 2162516 | 2163283 | 105.2523578 | 79.26276111 | 104.6293397 | 392.1651877 | 249.0697353 | 319.4457148 | -1.666111761 | 18.55369431 | 17.91800172  |
| B7LF63 | TY-2482_chromosome | + | 2163386 | 2163961 | 486.6121767 | 584.178771  | 525.9255674 | 578.0874661 | 488.7885271 | 501.0570579 | -0.020110175 | 0.045829689 | 0.036152887  |
| B7LF64 | TY-2482_chromosome | + | 2164286 | 2167381 | 159.4284022 | 165.9862447 | 160.9725706 | 529.8148965 | 563.4511333 | 506.0635209 | -1.729702503 | 33.98024762 | 33.16164225  |
| B7LF62 | TY-2482_chromosome | + | 2167387 | 2168712 | 34.7846096  | 43.1405206  | 44.26950868 | 93.78979623 | 91.78954591 | 92.47844424 | -1.203885005 | 6.524156717 | 6.112787493  |
| B7LF66 | TY-2482_chromosome | + | 2168766 | 2169542 | 54.80509812 | 75.60666537 | 81.3095779  | 92.43524742 | 107.8180708 | 81.2076516  | -0.433067533 | 1.222022683 | 1.067692049  |
| B7LF67 | TY-2482_chromosome | + | 2169542 | 2172409 | 335.0570235 | 417.6555984 | 288.1483864 | 378.7492651 | 373.8553743 | 363.5174717 | -0.201544057 | 0.401538281 | 0.333418177  |
| B7LF65 | TY-2482_chromosome | + | 2172577 | 2173974 | 102.581614  | 97.48887271 | 113.2060288 | 86.04137537 | 87.63009741 | 71.607216   | 0.376127923  | 1.218257989 | 1.06442355   |
| B7LF69 | TY-2482_chromosome | + | 2173992 | 2175308 | 256.6302828 | 245.3830095 | 242.9456679 | 210.827426  | 206.8814676 | 196.7689923 | 0.277751216  | 1.274915279 | 1.116594544  |
| B7LF70 | TY-2482_chromosome | + | 2175347 | 2176711 | 225.5707854 | 216.3179004 | 197.2021309 | 251.5563258 | 236.4254238 | 242.5525769 | -0.206380445 | 0.732243039 | 0.622940446  |
| B7LF68 | TY-2482_chromosome | - | 2176753 | 2177238 | 89.9653533  | 53.66280874 | 76.13536809 | 122.7985428 | 132.5500252 | 142.1636518 | -0.751542426 | 4.357299748 | 4.023951205  |
| B7LF72 | TY-2482_chromosome | + | 2177241 | 2179157 | 141.239205  | 134.3721763 | 133.739663  | 193.7899962 | 219.7163022 | 215.1100044 | -0.612425818 | 3.84444806  | 3.534629936  |
| B7LF73 | TY-2482_chromosome | - | 2179593 | 2181038 | 37.26299316 | 33.24956143 | 20.60931714 | 20.94338675 | 27.31312302 | 17.23108602 | 0.252051713  | 0.082988646 |              |
| B7LF71 | TY-2482_chromosome | + | 2181291 | 2181836 | 552.7509027 | 556.2039286 | 568.8954604 | 452.2698689 | 481.0663415 | 459.3519515 | 0.272117459  | 1.754308151 | 1.556544485  |
| B7LF75 | TY-2482_chromosome | - | 2181885 | 2183399 | 11163.8659  | 9653.296213 | 10004.12546 | 7195.057541 | 7235.982482 | 6440.240638 | 0.581498912  | 1.08892654  | 0.945504398  |
| B7LF76 | TY-2482_chromosome | - | 2183412 | 2184507 | 5524.37689  | 5317.43102  | 5278.674752 | 7073.548107 | 7389.214145 | 6636.47622  | -0.38788924  | 0.696425159 | 0.591325846  |
| B7LF77 | TY-2482_chromosome | - | 2184601 | 2186331 | 3912.371105 | 3917.734356 | 4104.609329 | 4310.919926 | 4554.665019 | 4290.124742 | -0.13224473  | 0.280972335 | 0.231545466  |
| B7LF74 | TY-2482_chromosome | - | 2186340 | 2187047 | 2140.804259 | 2129.639981 | 2310.023182 | 2155.342514 | 2283.301294 | 2169.643763 | 0.009949433  | 0.01516274  | 0.011844166  |
| B7LF79 | TY-2482_chromosome | - | 2187075 | 2187968 | 1739.245062 | 1675.023987 | 1857.434663 | 2047.064267 | 2175.756264 | 2185.540999 | -0.255945771 | 1.954296329 | 1.743018641  |
| B7LF80 | TY-2482_chromosome | + | 2188080 | 2188598 | 3034.411733 | 2994.350048 | 2892.314957 | 2646.002604 | 2755.9348   | 2882.695335 | 0.104593548  | 0.265822491 | 0.218859612  |
| B7LF81 | TY-2482_chromosome | - | 2188644 | 2189048 | 2431.006838 | 2190.881588 | 2165.409293 | 2198.015404 | 2474.202687 | 2509.814055 | -0.067623291 | 0.212886204 | 0.173100009  |

|                |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LF82</b>  | TY-2482_chromosome | - | 2189032 | 2189295 | 1994.203868 | 1880.159421 | 1994.119082 | 1807.998144 | 1827.509688 | 2066.257104 | 0.064102132  | 0.155206579 | 0.125038241 |
| <b>B7LF83</b>  | TY-2482_chromosome | + | 2189538 | 2190515 | 2939.545051 | 2460.053968 | 2616.43143  | 2540.957442 | 2374.852098 | 2304.361771 | 0.178862529  | 0.44036723  | 0.367096254 |
| <b>D8A3I5</b>  | TY-2482_chromosome | - | 2190599 | 2191285 | 2078.3051   | 1711.837472 | 2005.519026 | 1554.344054 | 1668.175179 | 1890.535145 | 0.237347279  | 0.939288101 | 0.809097856 |
| <b>B7LF85</b>  | TY-2482_chromosome | - | 2191422 | 2191730 | 863.2278274 | 867.6196133 | 902.1613954 | 635.4121912 | 604.0514154 | 610.8227296 | 0.514414315  | 6.164573076 | 5.762744294 |
| <b>B7LF86</b>  | TY-2482_chromosome | + | 2191769 | 2193205 | 3346.816576 | 3389.842507 | 3564.365928 | 1773.930883 | 1781.099168 | 1549.042192 | 0.1016377402 | 8.955914596 | 8.475387093 |
| <b>B7LF88</b>  | TY-2482_chromosome | - | 2193268 | 2194008 | 221.4868202 | 275.7472135 | 214.5166014 | 521.2663699 | 588.4633259 | 503.6841771 | -1.25699741  | 16.6111318  | 15.99921705 |
| <b>B7LF89</b>  | TY-2482_chromosome | - | 2194272 | 2197142 | 17123.53162 | 18687.78068 | 19385.55521 | 23352.94332 | 21073.95586 | 19349.28037 | -0.217189953 | 0.256865714 | 0.211030885 |
| <b>B7LF90</b>  | TY-2482_chromosome | - | 2197264 | 2197650 | 6446.521963 | 6844.113141 | 7061.351306 | 6305.216381 | 5670.827268 | 5417.785066 | 0.221022019  | 0.338791102 | 0.280600256 |
| <b>B7LF91</b>  | TY-2482_chromosome | - | 2197677 | 2198768 | 12105.67347 | 11978.89917 | 12630.16424 | 13050.69103 | 11685.41505 | 11644.62669 | 0.020918749  | 0.01373256  | 0.010676902 |
| <b>B7LF87</b>  | TY-2482_chromosome | - | 2199219 | 2200418 | 2603.674624 | 2626.336357 | 2403.96785  | 3416.646954 | 3272.825469 | 3248.29284  | -0.400027187 | 1.488051883 | 1.311176935 |
| <b>B7LF93</b>  | TY-2482_chromosome | - | 2200444 | 2201619 | 5431.608515 | 4958.256124 | 5208.175336 | 5610.990706 | 5266.336486 | 5244.483166 | -0.030343586 | 0.059587931 | 0.047337327 |
| <b>B7LF92</b>  | TY-2482_chromosome | - | 2201619 | 2202941 | 9365.1956   | 8974.05109  | 9486.647301 | 8984.430556 | 8483.161643 | 8136.465163 | 0.132061339  | 0.149009757 | 0.119959054 |
| <b>D3GTS2</b>  | TY-2482_chromosome | - | 2202970 | 2203551 | 4245.371756 | 3975.379756 | 4391.888495 | 4058.958046 | 3674.675823 | 3652.853914 | 0.17024565   | 0.358949949 | 0.297062958 |
| <b>D6JEQ2</b>  | TY-2482_chromosome | + | 2203576 | 2203761 | 1373.190212 | 1338.63896  | 1260.292079 | 1548.088867 | 1570.986684 | 1582.814452 | -0.251080238 | 1.799177928 | 1.598426575 |
| <b>B7LFG9</b>  | TY-2482_chromosome | + | 2203713 | 2204039 | 7332.919999 | 6524.061341 | 6344.93479  | 4865.968398 | 4678.647082 | 5301.727887 | 0.456412056  | 0.84875537  | 0.727282689 |
| <b>ssrS</b>    | TY-2482_chromosome | + | 2204084 | 2204266 | 719417.0191 | 259184.8562 | 136775.204  | 579625.1746 | 946515.1989 | 862067.561  | -1.011859044 | 1.569777215 | 1.386315933 |
| <b>A8A452</b>  | TY-2482_chromosome | + | 2204144 | 2204887 | 718458.0544 | 258529.3364 | 136026.6713 | 579944.3968 | 946892.847  | 862527.9443 | -1.015593642 | 1.577252561 | 1.392461941 |
| <b>rygC</b>    | TY-2482_chromosome | + | 2204916 | 2205066 | 219.3422886 | 257.9207746 | 174.7213219 | 233.1867117 | 274.4129506 | 261.5730978 | 0.967576787  | 0.833849922 |             |
| <b>E11F6</b>   | TY-2482_chromosome | - | 2205066 | 2205275 | 84.17570462 | 82.20427162 | 70.81626561 | 120.0914072 | 130.1462715 | 132.7674825 | -0.711988205 | 3.488856196 | 3.19249887  |
| <b>rygC</b>    | TY-2482_chromosome | + | 2205308 | 2205455 | 124.3487582 | 127.2281137 | 80.10963297 | 137.9246792 | 187.1486159 | 197.3228591 | -0.724737214 | 2.970076799 | 2.699937016 |
| <b>B7LFG7</b>  | TY-2482_chromosome | - | 2205674 | 2206903 | 2599.525783 | 2936.79272  | 2903.500075 | 2075.065242 | 2036.774653 | 1965.601112 | 0.455779572  | 2.38591516  | 2.146731373 |
| <b>A1FAFA2</b> | TY-2482_chromosome | - | 2207162 | 2207584 | 5858.098221 | 4313.017297 | 4824.758159 | 3587.846371 | 3661.032728 | 3757.295499 | 0.501689449  | 0.974317101 | 0.840234957 |
| <b>D7YB63</b>  | TY-2482_chromosome | - | 2207908 | 2208108 | 51.98524523 | 61.21412506 | 43.62885987 | 26.77040571 | 28.41082898 | 31.61304603 | 0.779199915  | 2.807837829 | 2.546361763 |
| <b>B7LFH3</b>  | TY-2482_chromosome | + | 2208201 | 2209091 | 1681.105364 | 1337.811347 | 1339.466702 | 1271.87117  | 1115.375834 | 1123.960041 | 0.334611527  | 2.343822446 | 2.10764625  |
| <b>B5YQB0</b>  | TY-2482_chromosome | + | 2209298 | 2211439 | 201.6099966 | 200.7050132 | 204.0080515 | 210.0821128 | 204.4064376 | 231.0452204 | -0.084235981 | 0.253208203 | 0.207566694 |
| <b>B7LFH1</b>  | TY-2482_chromosome | + | 2211435 | 2212427 | 59.13984633 | 49.83413633 | 38.09636852 | 60.62226676 | 74.19908695 | 68.61779891 | -0.630461092 | 1.949464781 | 1.738611416 |
| <b>B7LFH7</b>  | TY-2482_chromosome | + | 2212441 | 2213223 | 63.72940257 | 43.21125264 | 42.23400334 | 73.58473715 | 63.86865042 | 49.15590167 | -0.299535427 | 0.686558293 | 0.582234012 |
| <b>B7LFH6</b>  | TY-2482_chromosome | + | 2213250 | 2214725 | 102.9679112 | 103.5350524 | 130.1185452 | 167.882476  | 159.0278058 | 181.2927007 | -0.551700303 | 3.036721639 | 2.763655114 |
| <b>E9W1W1</b>  | TY-2482_chromosome | - | 2214673 | 2215621 | 157.4733293 | 146.3373052 | 150.9191397 | 162.8994174 | 160.2823206 | 154.4731945 | -0.060688676 | 0.160781754 | 0.129212313 |
| <b>B7LF10</b>  | TY-2482_chromosome | - | 2215791 | 2216528 | 2111.526047 | 2058.28978  | 2299.896754 | 1234.893705 | 1280.387843 | 1213.374119 | 0.818101446  | 13.00419795 | 12.44674556 |
| <b>B7LFH8</b>  | TY-2482_chromosome | - | 2216624 | 2217256 | 228.0088565 | 216.3560862 | 280.8834205 | 281.9627356 | 343.588595  | 353.5812252 | -0.373288851 | 2.338312994 | 2.102735826 |
| <b>B7LF12</b>  | TY-2482_chromosome | - | 2217398 | 2218255 | 4382.486594 | 4766.2776   | 4990.928175 | 2679.348392 | 2931.493428 | 2999.64076  | 0.7189953    | 3.701148697 | 3.396273816 |
| <b>B7LF11</b>  | TY-2482_chromosome | - | 2218616 | 2219692 | 43219.29598 | 39713.18813 | 43340.28464 | 36542.12758 | 33846.4102  | 32784.44639 | 0.313758511  | 0.371927538 | 0.307323367 |
| <b>B7LF14</b>  | TY-2482_chromosome | - | 2219910 | 2221070 | 33760.93537 | 31080.04859 | 33781.72991 | 35143.6539  | 29201.4526  | 28766.51758 | 0.10152936   | 0.0865287   | 0.068680294 |
| <b>B7LF13</b>  | TY-2482_chromosome | - | 2221123 | 2222139 | 18390.46301 | 16940.80781 | 17561.21066 | 13501.81616 | 10875.91998 | 12226.81844 | 0.544513943  | 0.910161217 | 0.82196026  |
| <b>B7LF16</b>  | TY-2482_chromosome | + | 2222511 | 2222939 | 657.1526843 | 788.4961915 | 668.3610209 | 728.1786511 | 592.65761   | 641.6089458 | 0.049270912  | 0.380809068 | 0.314789268 |
| <b>B7LF15</b>  | TY-2482_chromosome | + | 2222866 | 2223540 | 949.4071269 | 1009.366683 | 954.1097009 | 1530.979941 | 1287.258832 | 1335.762915 | -0.534232698 | 6.028112689 | 5.630868108 |
| <b>B7LF18</b>  | TY-2482_chromosome | + | 2223544 | 2224248 | 539.3097999 | 460.9317221 | 537.1458266 | 1371.838677 | 1224.430851 | 1284.378167 | -1.293389196 | 32.5122722  | 31.70942017 |
| <b>B7LF19</b>  | TY-2482_chromosome | + | 2224233 | 2224913 | 300.8346942 | 320.2583934 | 296.142202  | 956.6593984 | 849.7768359 | 700.1280721 | -1.482834442 | 27.15707177 | 26.41688304 |
| <b>B7LF17</b>  | TY-2482_chromosome | + | 2224877 | 2225584 | 294.1468298 | 294.2023467 | 283.187821  | 776.4660195 | 699.462436  | 615.6901687 | -1.278107567 | 22.1209613  | 21.44180301 |
| <b>B7LFJ1</b>  | TY-2482_chromosome | - | 2225562 | 2226272 | 791.7579606 | 894.9132605 | 748.9503586 | 594.4491251 | 551.5651931 | 552.7264587 | 0.468054784  | 5.352270692 | 4.974765343 |
| <b>B7LFJ2</b>  | TY-2482_chromosome | - | 2226272 | 2226778 | 846.4041378 | 841.9048344 | 706.036507  | 436.0224054 | 435.8616792 | 448.4849075 | 0.827339243  | 13.1079108  | 12.54825466 |
| <b>B7LFJ0</b>  | TY-2482_chromosome | - | 2226803 | 2227765 | 54.89328975 | 46.91146662 | 48.99007498 | 24.34417937 | 25.33632388 | 22.26300634 | 1.080081197  | 4.283615984 | 3.954928298 |
| <b>B7LFJ4</b>  | TY-2482_chromosome | - | 2227765 | 2229039 | 40.75200179 | 80.2813575  | 72.73534147 | 33.46811256 | 40.73557483 | 35.76242    | 0.733459899  | 2.543219942 | 2.294423764 |
| <b>B7LFJ5</b>  | TY-2482_chromosome | - | 2229057 | 2230442 | 39.28109451 | 40.11083295 | 44.34112428 | 31.76473303 | 49.66235975 | 50.82798411 | -0.073775891 | 0.133333366 | 0.107526102 |
| <b>B7LFJ7</b>  | TY-2482_chromosome | - | 2231230 | 2233218 | 20624.97759 | 18888.90916 | 17446.66836 | 15443.5763  | 14699.81853 | 13357.92586 | 0.379704302  | 0.579479513 | 0.487377817 |
| <b>D3GTU8</b>  | TY-2482_chromosome | + | 2233370 | 2234251 | 1455.611594 | 1865.802233 | 1659.456531 | 977.699648  | 948.6115655 | 952.4400334 | 0.737267842  | 12.49528485 | 11.94776671 |
| <b>Q47649</b>  | TY-2482_chromosome | + | 2234307 | 2235320 | 3458.974316 | 3703.529305 | 3499.988997 | 2031.59811  | 1971.261364 | 1925.573969 | 0.825991243  | 6.55429009  | 6.142247367 |
| <b>B7LFJ9</b>  | TY-2482_chromosome | - | 2235519 | 2236247 | 39.84233778 | 53.03930659 | 52.85401027 | 53.17744583 | 79.9808758  | 65.26507035 | -0.470556374 | 1.153966867 | 1.004572853 |
| <b>B7LFK0</b>  | TY-2482_chromosome | - | 2236396 | 2238369 | 6908.660113 | 5738.334437 | 6278.573296 | 9286.477813 | 10151.76968 | 8556.105277 | -0.53113741  | 1.110647152 | 0.965040791 |
| <b>B7LFK3</b>  | TY-2482_chromosome | + | 2238645 | 2238857 | 887.1114259 | 823.7822685 | 819.1184154 | 2123.214707 | 2506.706744 | 2080.444424 | -1.40168242  | 32.60223776 | 31.79605778 |
| <b>B7LFK1</b>  | TY-2482_chromosome | - | 2238860 | 2239108 | 191.9121482 | 138.182621  | 132.8399519 | 119.6531367 | 146.3574275 | 147.2065733 | 0.199474422  | 0.45339522  | 0.37829724  |
| <b>B7LFK4</b>  | TY-2482_chromosome | + | 2239164 | 2240315 | 4900.515092 | 3611.731272 | 3688.599322 | 2764.749372 | 2942.219124 | 2658.370013 | 0.581853099  | 2.191231038 | 1.96483466  |
| <b>D7YXP3</b>  | TY-2482_chromosome | + | 2240341 | 2240592 | 38.69315263 | 41.08021387 | 29.28305867 | 45.47421155 | 50.92662015 | 38.95396559 | -0.377541852 | 0.606272345 | 0.5118996   |
| <b>B7LFK6</b>  | TY-2482_chromosome | + | 2240754 | 2242145 | 1213.40165  | 967.5067373 | 1107.709611 | 4343.479407 | 3678.461532 | 4139.854753 | -1.838841124 | 25.89743227 | 25.17274732 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B5YQE2 | TY-2482_chromosome | + | 2242174 | 2242719 | 131.0223337 | 121.4814553 | 102.5854784 | 242.7381094 | 292.9598932 | 327.2122392 | -1.291949684 | 12.70372284 | 12.1518864   |
| B7LFK5 | TY-2482_chromosome | + | 2242817 | 2243521 | 463.5926586 | 499.0124155 | 495.6062422 | 854.6621963 | 684.3139593 | 659.0642551 | -0.610102212 | 5.831839383 | 5.438701126  |
| B7LFK9 | TY-2482_chromosome | + | 2243604 | 2244332 | 1391.103126 | 1366.255605 | 1284.708133 | 1340.687938 | 1287.837805 | 1177.162725 | 0.072819093  | 0.397414495 | 0.329466073  |
| B7LFL0 | TY-2482_chromosome | + | 2244348 | 2245295 | 2683.488296 | 2738.073795 | 2627.921287 | 1650.805634 | 1315.841712 | 1245.969804 | 0.914695217  | 14.20362892 | 13.6265858   |
| B7LFL1 | TY-2482_chromosome | + | 2245407 | 2245967 | 1066.145584 | 1092.543418 | 985.929295  | 1213.669602 | 1197.269836 | 1092.961699 | -0.182320239 | 0.922021842 | 0.793121175  |
| B7LFL2 | TY-2482_chromosome | + | 2245970 | 2246383 | 603.1100583 | 662.4555749 | 562.1691747 | 783.3096471 | 863.8715141 | 679.6404908 | -0.396632371 | 2.587218699 | 2.336152153  |
| B7LFK8 | TY-2482_chromosome | - | 2246565 | 2247542 | 80.41057363 | 109.904103  | 90.61937776 | 100.7399331 | 71.64387307 | 85.07952323 | 0.050710786  | 0.205612877 | 0.167075548  |
| B7LFL4 | TY-2482_chromosome | + | 2247560 | 2248261 | 1070.438996 | 872.4164181 | 981.2963915 | 1087.211194 | 1139.431427 | 1076.188209 | -0.132964522 | 0.937023002 | 0.80706751   |
| B7LFL5 | TY-2482_chromosome | + | 2248282 | 2248845 | 1243.578064 | 1224.355004 | 1334.487989 | 1297.141098 | 1260.17385  | 1150.478702 | 0.050200629  | 0.153123851 | 0.123141985  |
| B7LFL6 | TY-2482_chromosome | + | 2248845 | 2249132 | 570.2876786 | 555.4675337 | 526.0974603 | 609.87855   | 582.2638592 | 582.705732  | -0.112383844 | 0.452187608 | 0.3774272421 |
| B7LFL7 | TY-2482_chromosome | + | 2249143 | 2249733 | 1267.371908 | 1008.271959 | 1302.684191 | 1089.901452 | 1073.829939 | 1012.522983 | 0.23913376   | 1.008448736 | 0.871514101  |
| B7LFL8 | TY-2482_chromosome | - | 2249729 | 2250862 | 1384.302843 | 1219.841444 | 1264.460795 | 1312.047609 | 1342.960139 | 1228.395587 | 0.012727881  | 0.005701803 | 0.004045685  |
| B7LFL3 | TY-2482_chromosome | - | 2251023 | 2252027 | 114.8696903 | 164.8337077 | 142.1707916 | 447.3212164 | 534.4852791 | 633.6488773 | -1.993397205 | 30.19428904 | 29.42184204  |
| B7LFM0 | TY-2482_chromosome | - | 2252147 | 2253190 | 10642.75807 | 10091.52299 | 11074.12019 | 51303.56779 | 43261.1883  | 46272.95243 | -2.12594811  | 7.948448315 | 7.495192609  |
| B7LFL9 | TY-2482_chromosome | - | 2253369 | 2254085 | 893.3734818 | 1176.796747 | 1060.251802 | 887.2390304 | 1023.012092 | 808.6413937 | 0.146219464  | 0.98365277  | 0.848740602  |
| B7LFM2 | TY-2482_chromosome | - | 2254272 | 2254595 | 2224.032939 | 2557.686992 | 2399.361265 | 1682.89894  | 1662.642245 | 1810.985575 | 0.451715733  | 4.692944897 | 4.344530402  |
| B7LFM3 | TY-2482_chromosome | - | 2254598 | 2255314 | 1485.782361 | 1640.571025 | 1439.910507 | 1614.39373  | 1826.95705  | 1709.328595 | -0.209735537 | 0.965408103 | 0.832272678  |
| B7LFM4 | TY-2482_chromosome | + | 2255475 | 2256524 | 1168.3963   | 1005.805231 | 1199.370475 | 1788.020597 | 1846.068668 | 1707.716311 | -0.612687552 | 9.145986904 | 8.662291281  |
| E7HG43 | TY-2482_chromosome | + | 2256555 | 2256864 | 1248.324268 | 1207.665028 | 1292.917341 | 1261.025144 | 1230.642706 | 1213.413453 | 0.03213633   | 0.073900608 | 0.058402677  |
| B7LFM1 | TY-2482_chromosome | + | 2256895 | 2257971 | 766.8947482 | 692.1705548 | 742.7701416 | 1403.603225 | 1586.003014 | 1296.735845 | -0.94038437  | 17.6292498  | 17.00356788  |
| B7LFM7 | TY-2482_chromosome | + | 2258176 | 2259429 | 1041.729625 | 1006.521278 | 1007.240694 | 3638.547029 | 3060.029773 | 3298.994589 | -1.708945291 | 47.22180313 | 46.30384587  |
| B7LFM6 | TY-2482_chromosome | - | 2259485 | 2261617 | 677.8561393 | 636.9647952 | 726.6838823 | 880.7655564 | 962.9216779 | 891.11488   | -0.390778206 | 4.0196922   | 3.700904437  |
| Q1R759 | TY-2482_chromosome | - | 2261700 | 2261900 | 28.39873446 | 49.98460913 | 30.54474598 | 38.89594898 | 53.92764608 | 39.06669508 | -0.422020356 | 0.503945453 | 0.421094829  |
| B7LFM9 | TY-2482_chromosome | + | 2262015 | 2262719 | 1885.698241 | 1950.374102 | 2021.332986 | 1246.263797 | 1006.861    | 1049.796231 | 0.82430746   | 12.55262823 | 12.00264775  |
| B7LBZ3 | TY-2482_chromosome | + | 2262789 | 2263034 | 233.4742398 | 216.4630065 | 191.589545  | 456.8974669 | 566.7208396 | 514.2219644 | -1.271577949 | 18.46221265 | 17.82727143  |
| pheU   | TY-2482_chromosome | + | 2262828 | 2262903 | 91.18568864 | 72.41579321 | 52.71744884 | 240.8157987 | 318.8903909 | 285.0053549 | -1.981273302 | 22.08108985 | 21.40359076  |
| B7LFN0 | TY-2482_chromosome | + | 2263101 | 2264360 | 335.7776365 | 291.2720695 | 284.8130484 | 523.5082638 | 662.8389026 | 711.5809541 | -1.036112893 | 13.62763921 | 13.06034133  |
| E1U309 | TY-2482_chromosome | + | 2264776 | 2265470 | 666.4962947 | 693.1755099 | 656.7326828 | 587.4176955 | 664.2979784 | 710.8749097 | 0.030165182  | 0.123373146 | 0.09913257   |
| B3Y1G8 | TY-2482_chromosome | + | 2265584 | 2265874 | 57.96343051 | 50.89963125 | 46.36059512 | 121.1790755 | 118.1076077 | 154.7424386 | -1.337459955 | 9.087812572 | 8.604381844  |
| B7LFN2 | TY-2482_chromosome | - | 2266346 | 2266936 | 218.4739036 | 207.4741239 | 147.561419  | 190.236069  | 209.4776432 | 257.9175889 | -0.239154079 | 0.605364997 | 0.511100353  |
| B7LFN4 | TY-2482_chromosome | + | 2267329 | 2270193 | 4632.141594 | 4500.823358 | 4520.025109 | 3914.799096 | 3938.023315 | 3903.977707 | 0.219630268  | 0.406326339 | 0.3737359403 |
| B7LFN3 | TY-2482_chromosome | + | 2270198 | 2271199 | 5924.407011 | 5900.30416  | 5916.489052 | 4036.727436 | 3818.646055 | 3898.906567 | 0.593893989  | 1.376010248 | 1.208191514  |
| B7LFN6 | TY-2482_chromosome | + | 2271212 | 2273596 | 10753.34221 | 10827.66163 | 10824.35101 | 8889.64913  | 8642.620846 | 8524.746964 | 0.312308216  | 0.476314315 | 0.396867472  |
| B7LFN7 | TY-2482_chromosome | + | 2273609 | 2275234 | 5926.522946 | 6735.613269 | 6353.244516 | 4261.615655 | 4458.273345 | 4718.304693 | 0.477913637  | 1.036543398 | 0.897457011  |
| B7LFN5 | TY-2482_chromosome | + | 2275240 | 2278107 | 7358.371989 | 8263.379099 | 7723.936149 | 4466.915976 | 4812.844099 | 4398.22795  | 0.743409719  | 1.94250268  | 1.732423187  |
| B7LFN8 | TY-2482_chromosome | + | 2278199 | 2278489 | 319.6489912 | 289.9743122 | 273.3522263 | 265.0388237 | 333.4780709 | 350.5111473 | -0.095508498 | 0.322691709 | 0.26638673   |
| B7LFN9 | TY-2482_chromosome | + | 2278526 | 2278909 | 270.2101357 | 312.5122342 | 276.0386137 | 325.0592183 | 433.0397024 | 455.6029816 | -0.529700079 | 3.259365707 | 2.974055402  |
| B7LEP8 | TY-2482_chromosome | - | 2278835 | 2279983 | 629.3959032 | 733.5690869 | 623.8541783 | 837.7053038 | 894.3905315 | 1019.960772 | -0.513137655 | 4.557909328 | 4.215469248  |
| Q6Q6S9 | TY-2482_chromosome | + | 2280048 | 2280536 | 209.2929659 | 181.4779815 | 196.8617057 | 697.2319375 | 689.4682034 | 652.0654601 | -1.76806475  | 40.85042524 | 39.97692712  |
| P71290 | TY-2482_chromosome | - | 2280755 | 2281060 | 720.4166065 | 740.3218325 | 807.1353011 | 942.6835242 | 924.4386039 | 871.1744122 | -0.261178884 | 1.967936199 | 1.755383049  |
| B7LBU5 | TY-2482_chromosome | + | 2281131 | 2282651 | 3058.85458  | 2929.695126 | 3077.418062 | 3631.644163 | 3588.092128 | 3456.326387 | -0.223482768 | 0.668449984 | 0.565561388  |
| Q327G0 | TY-2482_chromosome | + | 2282729 | 2283226 | 406.1969354 | 335.2883173 | 439.1260808 | 328.0203319 | 358.9873713 | 347.5917641 | 0.259271427  | 0.923093257 | 0.794075514  |
| B7LBU0 | TY-2482_chromosome | + | 2283382 | 2287497 | 13742.46537 | 13900.42405 | 14457.69441 | 9321.972272 | 9313.098712 | 8054.215794 | 0.658629652  | 1.303498569 | 1.142539265  |
| B3IA48 | TY-2482_chromosome | - | 2287597 | 2287905 | 521.4183592 | 494.9155816 | 471.5247299 | 447.9377711 | 400.1308779 | 376.073139  | 0.272480665  | 1.664001411 | 1.472096551  |
| Q5K5W0 | TY-2482_chromosome | - | 2287935 | 2288601 | 457.4612553 | 361.0269281 | 390.9884883 | 310.5482121 | 370.9936735 | 349.4884695 | 0.272827206  | 1.154850606 | 1.005333858  |
| D3GV17 | TY-2482_chromosome | + | 2288791 | 2289051 | 212.6731369 | 168.72396   | 223.7005321 | 111.7202737 | 128.4241861 | 115.8403404 | 0.83605146   | 5.559857186 | 5.175238956  |
| B7LFP0 | TY-2482_chromosome | + | 2289085 | 2289619 | 595.5757114 | 483.3952275 | 438.661235  | 447.7752388 | 486.5585837 | 466.7794563 | 0.032618561  | 0.126173165 | 0.101288167  |
| B3I233 | TY-2482_chromosome | - | 2290887 | 2291489 | 314.2647061 | 412.2082857 | 302.2797426 | 188.8584789 | 268.3225235 | 273.710934  | 0.409093192  | 2.486771143 | 2.241661959  |
| B7LX19 | TY-2482_chromosome | - | 2291436 | 2292566 | 697.6602945 | 733.6011634 | 765.5820838 | 762.9065461 | 865.2222915 | 954.1029131 | -0.223200665 | 1.445108248 | 1.271748819  |
| B7LBX6 | TY-2482_chromosome | + | 2292615 | 2292812 | 133.9072938 | 145.4739174 | 163.3465185 | 110.9358407 | 146.5285069 | 121.75328   | 0.236804595  | 0.685908155 | 0.58169448   |
| D3GV13 | TY-2482_chromosome | - | 2293092 | 2293496 | 646.693768  | 643.3671685 | 587.9562445 | 657.8545342 | 683.1593375 | 916.9395675 | -0.382884779 | 2.66695519  | 2.411630483  |
| D3GV12 | TY-2482_chromosome | - | 2293884 | 2295035 | 128.466132  | 1441.475702 | 1423.58234  | 1288.726427 | 1631.707545 | 1508.308013 | -0.138756962 | 0.55837261  | 0.468517085  |
| B7LWW5 | TY-2482_chromosome | - | 2295145 | 2295497 | 1674.599988 | 1826.824434 | 1851.784949 | 1088.336998 | 1494.033945 | 1494.079786 | 0.395196225  | 2.825798825 | 2.563368614  |
| D3GV09 | TY-2482_chromosome | - | 2295517 | 2296080 | 1445.866927 | 1677.209618 | 1825.561997 | 574.4956943 | 779.0443581 | 762.4025904 | 1.234848685  | 23.66755205 | 22.96797263  |
| D3GV08 | TY-2482_chromosome | - | 2296670 | 2296922 | 361.2823661 | 388.6618544 | 402.0861764 | 357.3265745 | 475.7702895 | 513.731708  | -0.216011345 | 0.972165125 | 0.838201458  |



|                |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>Q327G0</b>  | TY-2482_chromosome | - | 2297829 | 2298326 | 619.5901004 | 624.2284283 | 690.7459788 | 510.1917383 | 563.2094443 | 581.2960148 | 0.247815972  | 1.361762534 | 1.195477509 |
| <b>B7LBU5</b>  | TY-2482_chromosome | - | 2298404 | 2299924 | 2715.797991 | 2568.498636 | 2649.358261 | 3165.140895 | 3228.673942 | 2962.200326 | -0.228351394 | 0.757245878 | 0.645671103 |
| <b>P71290</b>  | TY-2482_chromosome | + | 2299995 | 2300300 | 768.9112359 | 783.2680286 | 778.7312987 | 919.3082108 | 947.6401987 | 891.0630543 | -0.2474475   | 1.738323422 | 1.541792575 |
| <b>Q9S110</b>  | TY-2482_chromosome | + | 2300218 | 2300586 | 1618.680521 | 1486.557349 | 1613.354252 | 1766.407172 | 1651.835859 | 1625.356643 | -0.074175694 | 0.412109552 | 0.342223905 |
| <b>B7LFP9</b>  | TY-2482_chromosome | - | 2300519 | 2301089 | 6924.060083 | 6790.467708 | 7210.808997 | 5821.478282 | 5766.02344  | 5571.796883 | 0.296668754  | 0.453322526 | 0.378297274 |
| <b>B7LFAQ0</b> | TY-2482_chromosome | - | 2301520 | 2304066 | 8181.129582 | 9232.582243 | 9872.795378 | 1107.980894 | 1378.106135 | 1329.860096 | 0.289612744  | 18.34130368 | 17.70860881 |
| <b>B7LFP6</b>  | TY-2482_chromosome | - | 2304073 | 2307483 | 5180.589631 | 5616.902207 | 6066.931134 | 491.286305  | 657.0864549 | 601.4098601 | 3.280220355  | 54.8491435  | 53.8816512  |
| <b>B7LFAQ2</b> | TY-2482_chromosome | - | 2307483 | 2308082 | 911.1187135 | 1070.963456 | 1136.00703  | 130.1974066 | 156.0954964 | 148.8055808 | 2.838166082  | 107.946323  | 106.6842111 |
| <b>B7LFAQ1</b> | TY-2482_chromosome | - | 2308070 | 2308381 | 600.6390622 | 724.9007427 | 722.4090472 | 68.3718159  | 62.15917234 | 67.75296398 | 3.345067498  | 119.2816266 | 117.9544199 |
| <b>B7LFAQ4</b> | TY-2482_chromosome | - | 2308412 | 2309839 | 2060.222762 | 2382.654654 | 2576.998313 | 185.8816284 | 203.6320748 | 169.3150661 | 3.646756747  | 201.1568061 | 199.5038545 |
| <b>B7LFAQ5</b> | TY-2482_chromosome | - | 2309843 | 2310394 | 1025.418455 | 1432.859485 | 1387.483418 | 88.33757485 | 142.7669177 | 116.9371917 | 3.42750595   | 114.817105  | 113.521951  |
| <b>B7LFAQ6</b> | TY-2482_chromosome | - | 2310402 | 2311475 | 2270.226447 | 2793.397613 | 3114.113948 | 300.3093448 | 428.068669  | 396.2361003 | 2.869904177  | 93.66078762 | 92.45106376 |
| <b>B7LFAQ7</b> | TY-2482_chromosome | - | 2311482 | 2311784 | 851.7513451 | 1132.870782 | 1362.32716  | 141.906694  | 190.8601446 | 205.2192596 | 2.658028516  | 62.94733051 | 61.9082078  |
| <b>B7LFAQ3</b> | TY-2482_chromosome | - | 2311791 | 2312255 | 1067.71678  | 1430.205827 | 1532.287655 | 159.3634735 | 233.3053239 | 222.3627989 | 2.704201658  | 78.3727477  | 77.24149926 |
| <b>B7LFAQ9</b> | TY-2482_chromosome | - | 2312269 | 2314248 | 3963.743864 | 4980.101832 | 5110.006352 | 501.6212337 | 761.5010629 | 679.3298915 | 2.842967448  | 47.37207654 | 46.45339845 |
| <b>B7LFR0</b>  | TY-2482_chromosome | - | 2314264 | 2315220 | 1686.10061  | 1898.319573 | 1906.360174 | 153.5040312 | 250.0268575 | 226.0014656 | 3.121415803  | 123.3805811 | 122.0286595 |
| <b>B7LFR1</b>  | TY-2482_chromosome | - | 2315187 | 2316986 | 3772.937024 | 4044.49519  | 4272.556761 | 330.3840187 | 404.1782312 | 383.6333109 | 3.44134855   | 170.3791338 | 168.823874  |
| <b>B7LFR2</b>  | TY-2482_chromosome | - | 2316982 | 2317401 | 1752.343206 | 1681.41203  | 1947.797922 | 145.4028603 | 159.7947685 | 159.7947685 | 3.519930989  | 189.2542022 | 187.6403276 |
| <b>B7LFR3</b>  | TY-2482_chromosome | - | 2317414 | 2317917 | 6882.929474 | 8785.284751 | 9026.501351 | 409.9289843 | 528.0243911 | 512.2736519 | 4.074930429  | 38.5641644  | 37.70536787 |
| <b>B7LFAQ8</b> | TY-2482_chromosome | - | 2317930 | 2319405 | 8029.802929 | 8711.123741 | 9357.062009 | 734.0256368 | 955.8452751 | 859.5621958 | 3.364716947  | 24.72427942 | 24.01053216 |
| <b>B7LFR5</b>  | TY-2482_chromosome | - | 2319411 | 2319884 | 2004.270404 | 2017.876608 | 2134.809513 | 185.14348   | 245.1298842 | 247.7581118 | 3.200620009  | 166.5935576 | 165.056651  |
| <b>P16943</b>  | TY-2482_chromosome | + | 2320280 | 2321307 | 151.4304989 | 178.0116608 | 145.4678894 | 243.2929011 | 250.607987  | 291.1411599 | -0.775321528 | 5.312584274 | 4.96075749  |
| <b>B7LFS0</b>  | TY-2482_chromosome | - | 2321422 | 2321904 | 127.0147233 | 162.5816854 | 109.9043815 | 269.6161603 | 293.3234261 | 308.325623  | -1.222725452 | 10.57608112 | 10.05879212 |
| <b>D8EKF9</b>  | TY-2482_chromosome | + | 2321982 | 2322591 | 240.7890602 | 282.7011501 | 224.5982457 | 536.8600562 | 620.4797711 | 725.1325272 | -1.383946765 | 19.59786436 | 18.95189888 |
| <b>B7LFS4</b>  | TY-2482_chromosome | - | 2322628 | 2322948 | 173.4025135 | 233.7324569 | 221.0024041 | 338.2988177 | 423.4724846 | 483.4746256 | -1.019037614 | 9.257210126 | 8.770323103 |
| <b>B7LFS2</b>  | TY-2482_chromosome | - | 2323017 | 2323658 | 219.7289566 | 260.6175045 | 210.1696093 | 142.4293654 | 196.2390808 | 187.7391451 | 0.373275696  | 1.646746348 | 1.456192748 |
| <b>B7LFS6</b>  | TY-2482_chromosome | - | 2323682 | 2323987 | 222.475574  | 225.8148628 | 197.2361987 | 79.78230102 | 96.36104287 | 79.72526751 | 1.305995424  | 14.82000535 | 14.23164664 |
| <b>D3GUY0</b>  | TY-2482_chromosome | - | 2324312 | 2324614 | 389.0987199 | 432.8626999 | 455.1328524 | 190.5814574 | 194.6832748 | 195.6780736 | 1.134693963  | 17.1650606  | 16.54560521 |
| <b>B7LFT1</b>  | TY-2482_chromosome | - | 2324682 | 2326466 | 2622.027703 | 2777.215211 | 2802.965663 | 953.8999913 | 977.6887041 | 981.559614  | 1.489498457  | 42.55409106 | 41.67072967 |
| <b>B7LFT2</b>  | TY-2482_chromosome | - | 2326663 | 2327826 | 1558.967059 | 1632.771015 | 1626.348827 | 236.7082027 | 266.050004  | 287.3253039 | 2.608026055  | 126.7399898 | 125.3700948 |
| <b>B7LG71</b>  | TY-2482_chromosome | - | 2328009 | 2329367 | 3376.154804 | 3319.735029 | 3814.090301 | 796.1841155 | 766.4886356 | 767.8005326 | 2.200363504  | 79.06065415 | 77.92108814 |
| <b>B7LG72</b>  | TY-2482_chromosome | - | 2329392 | 2329910 | 1411.410441 | 1506.697721 | 1671.908107 | 274.1302655 | 259.3899367 | 282.8675074 | 2.505542252  | 111.3451056 | 110.0667868 |
| <b>E3PN47</b>  | TY-2482_chromosome | - | 2330414 | 2330686 | 281.2849858 | 321.7324294 | 251.981243  | 220.8230726 | 218.3585456 | 288.8580327 | 0.179218482  | 0.808072887 | 0.690951202 |
| <b>B7LG74</b>  | TY-2482_chromosome | - | 2330640 | 2330945 | 478.6270767 | 569.2854106 | 557.2708093 | 327.4780579 | 328.4880928 | 400.8861652 | 0.586645335  | 5.460841831 | 5.079166557 |
| <b>B7LG70</b>  | TY-2482_chromosome | - | 2330969 | 2331625 | 887.6495613 | 921.7891742 | 915.1927423 | 578.3901255 | 472.5674338 | 537.3141944 | 0.771019125  | 12.12412395 | 11.67192939 |
| <b>B7LG78</b>  | TY-2482_chromosome | - | 2332861 | 2333427 | 131.9820451 | 85.66555677 | 102.2741234 | 114.9469944 | 142.6940731 | 165.3083717 | -0.321122954 | 1.284634368 | 1.125937675 |
| <b>B7LG80</b>  | TY-2482_chromosome | - | 2333677 | 2333877 | 214.470098  | 225.0686711 | 194.3442403 | 165.3588943 | 196.7779161 | 225.5253405 | 0.08598487   | 0.272949511 | 0.224982457 |
| <b>Q0TDJ8</b>  | TY-2482_chromosome | - | 2334047 | 2334337 | 433.4061082 | 642.2727293 | 458.8257015 | 332.0578324 | 322.1263775 | 324.9582793 | 0.529514437  | 4.837387235 | 4.481732701 |
| <b>D3GU29</b>  | TY-2482_chromosome | + | 2334883 | 2335158 | 47.72072436 | 55.17204557 | 58.61469491 | 48.80224721 | 39.34045989 | 43.16765356 | 0.288844842  | 0.650123423 | 0.549324636 |
| <b>B7LG83</b>  | TY-2482_chromosome | + | 2335220 | 2335816 | 97.28905618 | 86.24940012 | 93.39559063 | 79.56370218 | 89.84340498 | 77.4583692  | 0.187672553  | 0.407074959 | 0.337904032 |
| <b>D3GU27</b>  | TY-2482_chromosome | + | 2335895 | 2336155 | 13.50956626 | 19.5648711  | 17.16892716 | 19.78374781 | 31.26370714 | 37.39025881 | -0.855805295 | 1.529926267 | 1.349770638 |
| <b>B7LG85</b>  | TY-2482_chromosome | + | 2337314 | 2338330 | 360.8339876 | 231.7732991 | 276.1450159 | 103.6627769 | 182.2067002 | 187.046717  | 0.968249253  | 5.250009213 | 4.877250299 |
| <b>C8TV65</b>  | TY-2482_chromosome | + | 2338311 | 2339312 | 47.19001407 | 49.2496028  | 46.09070273 | 33.82407564 | 60.193675   | 59.1499308  | -0.115029624 | 0.172514484 | 0.139257733 |
| <b>B7LG82</b>  | TY-2482_chromosome | + | 2339643 | 2342765 | 788.3508759 | 825.754968  | 755.9679144 | 812.2421741 | 731.3172606 | 802.5677603 | -0.00767581  | 0.031808192 | 0.024968768 |
| <b>B7LG88</b>  | TY-2482_chromosome | + | 2342883 | 2345402 | 517.0461592 | 502.6652783 | 560.0477307 | 598.8843326 | 602.9713435 | 596.1171564 | -0.163813222 | 0.958285706 | 0.826212848 |
| <b>B7LG89</b>  | TY-2482_chromosome | + | 2345481 | 2345933 | 206.7724161 | 239.9855787 | 207.1297239 | 142.0919323 | 146.2637865 | 160.1143401 | 0.502141752  | 3.159948332 | 2.880140776 |
| <b>B7LG87</b>  | TY-2482_chromosome | + | 2346015 | 2346245 | 35.31608043 | 12.37450313 | 15.11199305 | 29.08301135 | 17.20194048 | 20.39649115 | 0.027001898  | 0.077041408 | 0.060914607 |
| <b>B7LG91</b>  | TY-2482_chromosome | + | 2346348 | 2347163 | 81.06394378 | 96.99652079 | 59.78868145 | 44.89074357 | 47.00643749 | 36.13248749 | 0.780754173  | 3.606662389 | 3.305806354 |
| <b>Q5K5L6</b>  | TY-2482_chromosome | - | 2347465 | 2348421 | 203.8730445 | 137.3653025 | 185.1837412 | 170.1726655 | 198.8420864 | 190.6815263 | 0.00148322   | 0.152941085 | 0.123052425 |
| <b>E9TQB2</b>  | TY-2482_chromosome | + | 2349072 | 2349218 | 22.51678884 | 18.7239779  | 20.20131134 | 35.87148301 | 35.20980222 | 58.18924143 | -1.033959289 | 3.117197267 | 2.839868097 |
| <b>B7LG96</b>  | TY-2482_chromosome | + | 2349140 | 2349619 | 61.84071552 | 69.08897065 | 57.75981609 | 134.0244964 | 126.7719559 | 141.1320914 | -1.132234762 | 7.341470186 | 6.902517801 |
| <b>B7LG97</b>  | TY-2482_chromosome | + | 2349619 | 2350038 | 441.8772032 | 422.9269303 | 412.5294993 | 365.5365757 | 348.8398767 | 369.7842268 | 0.327119911  | 1.291858581 | 1.132408993 |
| <b>B7LG90</b>  | TY-2482_chromosome | + | 2350126 | 2350965 | 253.7340645 | 293.9978306 | 233.243714  | 149.7766949 | 167.0028337 | 180.4809592 | 0.595023818  | 4.34407097  | 4.011845603 |
| <b>B7LG99</b>  | TY-2482_chromosome | - | 2351252 | 2351785 | 177.8659105 | 249.5800417 | 174.414489  | 96.79722127 | 106.1197181 | 115.0575107 | 0.813755914  | 5.996892669 | 5.60051581  |
| <b>B7LGA0</b>  | TY-2482_chromosome | - | 2351790 | 2352965 | 253.1165611 | 187.0841947 | 261.0168873 | 171.8351193 | 147.0240142 | 173.3858235 | 0.597177303  | 2.913635195 | 2.646724383 |

|                |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LGA1</b>  | TY-2482_chromosome | - | 2352965 | 2353939 | 235.8854028 | 220.8805109 | 265.3621744 | 125.6053503 | 136.3721908 | 174.2118725 | 0.777684842  | 5.266572194 | 4.892991531  |
| <b>B7LGG98</b> | TY-2482_chromosome | - | 2353945 | 2354541 | 291.0167515 | 284.8923927 | 300.1822859 | 99.64045424 | 98.02642738 | 126.5904029 | 1.45301277   | 20.10204396 | 19.45143358  |
| <b>B7LGA2</b>  | TY-2482_chromosome | - | 2354541 | 2354909 | 229.2687381 | 223.9440245 | 238.3784233 | 86.55845113 | 74.40417167 | 116.9491702 | 1.339551928  | 13.85333341 | 13.28248761  |
| <b>B7LGA4</b>  | TY-2482_chromosome | - | 2354909 | 2355469 | 421.084328  | 412.9028526 | 440.9304037 | 149.683252  | 142.4734728 | 179.4064689 | 1.455144776  | 25.38244122 | 24.66189024  |
| <b>B7LGA5</b>  | TY-2482_chromosome | - | 2355476 | 2355955 | 345.0884606 | 367.4017637 | 397.643517  | 79.1773186  | 87.28072853 | 137.7760616 | 1.891513763  | 27.49308756 | 26.75050073  |
| <b>B7LGA3</b>  | TY-2482_chromosome | - | 2355948 | 2357168 | 499.5111737 | 574.5396359 | 537.3618393 | 100.2885916 | 113.2996832 | 149.0673548 | 2.134881094  | 48.94794342 | 48.01756646  |
| <b>B7LGA7</b>  | TY-2482_chromosome | - | 2357171 | 2358661 | 674.6025481 | 703.9549217 | 656.7770353 | 140.88099   | 129.6179841 | 147.1387594 | 2.26767089   | 73.28335947 | 72.17391662  |
| <b>B7LGA8</b>  | TY-2482_chromosome | - | 2358664 | 2360721 | 835.2918246 | 827.3279375 | 781.8188279 | 178.287369  | 182.6055718 | 176.1892394 | 2.175311462  | 75.01253808 | 73.8940471   |
| <b>B7LGA9</b>  | TY-2482_chromosome | - | 2360754 | 2361710 | 186.3272818 | 158.6789478 | 162.5751258 | 80.64778168 | 106.0629041 | 112.5268884 | 0.791819259  | 4.838397479 | 4.482545583  |
| <b>B7LGA6</b>  | TY-2482_chromosome | - | 2361731 | 2362138 | 104.804787  | 69.45332081 | 93.31808557 | 68.33718916 | 91.38872459 | 116.5052138 | 0.054231951  | 0.047119263 | 0.037007442  |
| <b>B7LGB1</b>  | TY-2482_chromosome | - | 2362207 | 2363013 | 596.3991876 | 568.3685792 | 586.2026888 | 283.4594144 | 325.8289025 | 392.8390019 | 0.826802536  | 9.614016174 | 9.118229914  |
| <b>B7LGB2</b>  | TY-2482_chromosome | - | 2363156 | 2367784 | 5955.993586 | 4997.730044 | 4952.784586 | 1574.022852 | 1585.62013  | 1622.919745 | 1.753609946  | 17.75091417 | 17.12230769  |
| <b>B7LGB4</b>  | TY-2482_chromosome | - | 2368255 | 2369934 | 96.27604176 | 132.9469759 | 84.07065818 | 21.04663491 | 46.40636406 | 36.55645354 | 1.476879005  | 9.354086095 | 8.863984045  |
| <b>B7LGB5</b>  | TY-2482_chromosome | - | 2370293 | 2370293 | 6254.874386 | 6782.982831 | 7124.466059 | 988.0164265 | 961.115319  | 829.3779272 | 2.853819434  | 42.91256442 | 42.02519412  |
| <b>B7LGB3</b>  | TY-2482_chromosome | - | 2372486 | 2372887 | 1332.146196 | 1517.536481 | 1749.234429 | 206.1813661 | 192.4319448 | 189.9067165 | 2.977900408  | 128.4943116 | 127.1120074  |
| <b>B7LGB7</b>  | TY-2482_chromosome | - | 2372895 | 2374115 | 899.3900559 | 998.8260796 | 1014.136675 | 187.129287  | 182.790427  | 188.3206916 | 2.374125239  | 90.08756415 | 88.88897666  |
| <b>B7LGB8</b>  | TY-2482_chromosome | - | 2374129 | 2375178 | 571.2085967 | 710.4980856 | 615.0787199 | 22.67208108 | 24.11139993 | 38.6539807  | 4.430462367  | 153.6060414 | 152.1252507  |
| <b>B7LGB9</b>  | TY-2482_chromosome | - | 2375181 | 2376677 | 1016.612391 | 1138.854651 | 1236.575531 | 33.93754691 | 29.99783066 | 20.6356488  | 5.313113335  | 262.6146302 | 260.80074502 |
| <b>C8UFR4</b>  | TY-2482_chromosome | + | 2376928 | 2377689 | 165.6096498 | 143.4956005 | 167.9087235 | 184.0771519 | 153.8167002 | 169.384761  | -0.04985713  | 0.182601094 | 0.147650451  |
| <b>B7LGC4</b>  | TY-2482_chromosome | + | 2382124 | 2383293 | 110.1515571 | 109.2018864 | 91.01644689 | 87.88602768 | 98.13234439 | 70.90597138 | 0.233720427  | 0.7346459   | 0.624867124  |
| <b>B7LGC5</b>  | TY-2482_chromosome | - | 2383334 | 2384491 | 137.8501618 | 124.4386688 | 127.9849107 | 91.84127018 | 102.2448462 | 117.6166345 | 0.346172851  | 1.178430877 | 1.027068943  |
| <b>B7LGC0</b>  | TY-2482_chromosome | - | 2384410 | 2385477 | 100.0848528 | 81.19354726 | 83.5996056  | 58.34606613 | 64.84914339 | 94.54014334 | 0.323401072  | 0.735442037 | 0.615422037  |
| <b>B7LGC7</b>  | TY-2482_chromosome | - | 2385511 | 2386071 | 45.49647313 | 58.40011228 | 35.19211917 | 30.94871418 | 36.62417072 | 48.97693388 | 0.155702866  | 0.380130549 | 0.314414487  |
| <b>B7LGC8</b>  | TY-2482_chromosome | - | 2386083 | 2386904 | 44.76397885 | 55.35317448 | 62.68693456 | 63.31215523 | 59.18515621 | 85.88237664 | -0.344208699 | 0.843193683 | 0.722525783  |
| <b>B7LGC9</b>  | TY-2482_chromosome | - | 2386907 | 2388253 | 40.17414799 | 37.95485806 | 30.63449709 | 42.71453375 | 47.55394713 | 47.03572123 | -0.363551673 | 0.645748219 | 0.545826352  |
| <b>B7LGC6</b>  | TY-2482_chromosome | - | 2388302 | 2389057 | 19.12387612 | 13.89387694 | 15.92376278 | 18.7693785  | 36.29494028 | 24.55084047 | -0.657807557 | 1.278316048 | 1.11987003   |
| <b>B7LGD1</b>  | TY-2482_chromosome | - | 2389092 | 2389802 | 14.20859109 | 2.964071039 | 12.82536094 | 19.80175143 | 26.49716429 | 31.10190311 | -1.08284708  | 3.479469616 | 3.183800281  |
| <b>B7LGD0</b>  | TY-2482_chromosome | + | 2389976 | 2390665 | 9.405184914 | 11.88533965 | 3.435483819 | 15.20640753 | 19.26630205 | 23.17615441 | -1.367009883 | 2.075957512 | 1.856427067  |
| <b>B7LGD2</b>  | TY-2482_chromosome | - | 2390720 | 2392216 | 25.19368196 | 32.83303929 | 36.89216064 | 45.3686726  | 54.48050638 | 64.33219942 | -0.785860432 | 2.419337359 | 2.178187409  |
| <b>B7LGD4</b>  | TY-2482_chromosome | - | 2392511 | 2394367 | 1745.689409 | 3004.274125 | 3009.825239 | 1794.171976 | 1701.293282 | 1743.414454 | 0.731033994  | 5.565372926 | 5.180332641  |
| <b>B7LGD5</b>  | TY-2482_chromosome | + | 2394572 | 2395435 | 2446.655054 | 1396.91802  | 1524.166993 | 693.6639446 | 660.704882  | 667.4496917 | 1.1302657    | 27.83408498 | 27.08666186  |
| <b>D8EBP7</b>  | TY-2482_chromosome | - | 2395432 | 2395821 | 521.4802351 | 480.1102997 | 497.1730054 | 502.7546143 | 508.2011155 | 490.6004032 | 0.011583901  | 0.001740866 | 0.00043393   |
| <b>B7LGF78</b> | TY-2482_chromosome | + | 2395738 | 2396715 | 1288.718565 | 1191.648101 | 1267.161155 | 1483.325769 | 1431.177846 | 1418.742271 | -0.19089031  | 1.42028156  | 1.249379066  |
| <b>B7LGD3</b>  | TY-2482_chromosome | - | 2396843 | 2397088 | 140.6450188 | 152.7302588 | 190.309258  | 583.1072988 | 579.2379987 | 636.5618699 | -1.864933862 | 38.37925793 | 37.52296816  |
| <b>B7LGD8</b>  | TY-2482_chromosome | - | 2397104 | 2397442 | 228.7243513 | 197.900832  | 209.8628217 | 846.9795498 | 887.1865859 | 853.457702  | 1.1302657    | 55.3923483  | 54.42281403  |
| <b>B7LGD9</b>  | TY-2482_chromosome | - | 2397438 | 2397923 | 565.3433783 | 488.4302393 | 564.4505118 | 1543.334138 | 1579.470787 | 1542.185237 | -1.485878874 | 43.88018195 | 42.98536448  |
| <b>B7LGE0</b>  | TY-2482_chromosome | - | 2397919 | 2398410 | 867.4512343 | 753.7892513 | 801.7739444 | 2194.953076 | 2090.44268  | 1990.343084 | -1.349522802 | 36.39833691 | 35.5579976   |
| <b>B7LGD7</b>  | TY-2482_chromosome | - | 2398413 | 2400113 | 2356.695514 | 2213.941492 | 2402.077072 | 6516.293703 | 5668.503811 | 5809.786748 | -1.349011657 | 9.43889622  | 8.947717184  |
| <b>B7LGE2</b>  | TY-2482_chromosome | - | 2400113 | 2401288 | 1376.958193 | 1470.82987  | 1426.700728 | 4803.198382 | 4328.863007 | 4249.909273 | -1.663916842 | 18.44819529 | 17.81362927  |
| <b>B7LGE3</b>  | TY-2482_chromosome | - | 2401281 | 2402264 | 2002.442603 | 1935.219126 | 2044.373858 | 5161.522951 | 4251.388397 | 4283.425703 | -1.186812372 | 8.906280475 | 8.427852285  |
| <b>B7LGE4</b>  | TY-2482_chromosome | - | 2402270 | 2403385 | 4848.216599 | 4557.458517 | 4706.762221 | 9648.619028 | 7469.717334 | 7247.544501 | -0.784156648 | 1.92219356  | 1.713736891  |
| <b>B7LGE5</b>  | TY-2482_chromosome | - | 2403395 | 2403577 | 472.5895791 | 399.727514  | 459.6298049 | 637.4025489 | 567.0380906 | 556.2349664 | -0.364268255 | 2.934004706 | 2.665966483  |
| <b>B7LGE6</b>  | TY-2482_chromosome | - | 2403577 | 2403861 | 26.22886265 | 27.92705575 | 28.65836162 | 38.37591702 | 50.6182992  | 33.25850743 | -0.572978805 | 1.213951144 | 1.0630612333 |
| <b>B7LGE7</b>  | TY-2482_chromosome | - | 2403983 | 2404906 | 145.630006  | 194.407579  | 176.6010937 | 65.32028199 | 51.77774207 | 44.75808783 | 1.611580458  | 16.9795468  | 16.36225927  |
| <b>B7LGE1</b>  | TY-2482_chromosome | + | 2405024 | 2406061 | 1121.604019 | 1144.226371 | 1130.748435 | 4935.014398 | 4213.230979 | 4366.951603 | -2.000732207 | 29.56479282 | 28.79949906  |
| <b>B7LGE9</b>  | TY-2482_chromosome | - | 2406107 | 2406598 | 822.6534798 | 912.7542351 | 799.122618  | 1641.834353 | 1617.338633 | 1746.025604 | -1.017484674 | 20.64269906 | 19.98463111  |
| <b>B7LGF0</b>  | TY-2482_chromosome | + | 2406789 | 2407670 | 927.7376085 | 956.9878556 | 763.6009032 | 232.1117244 | 227.177374  | 244.6724475 | 1.866794557  | 53.3854771  | 52.42526046  |
| <b>B7LGF1</b>  | TY-2482_chromosome | - | 2407715 | 2408137 | 4097.273233 | 3731.077691 | 4041.448066 | 761.6794014 | 685.2520387 | 719.510262  | 2.477547268  | 57.81522151 | 56.82109745  |
| <b>B7LGF2</b>  | TY-2482_chromosome | - | 2408147 | 2408878 | 10683.5954  | 11115.81409 | 11031.20917 | 2238.953239 | 2006.208175 | 2067.423271 | 2.370309326  | 12.68752952 | 12.13600295  |
| <b>B7LGF4</b>  | TY-2482_chromosome | + | 2409130 | 2410314 | 822.9254281 | 888.6326872 | 923.5895112 | 523.6055673 | 486.3454135 | 531.4506709 | 0.773407713  | 12.20129214 | 11.65683243  |
| <b>B7LGF5</b>  | TY-2482_chromosome | + | 2410457 | 2411113 | 2181.460377 | 2423.722912 | 2126.661548 | 2380.622965 | 1939.638634 | 2053.049269 | 0.036318216  | 0.288471932 | 0.238166813  |
| <b>B7LGE8</b>  | TY-2482_chromosome | - | 2411159 | 2412112 | 400.3190301 | 517.4570414 | 371.337548  | 472.7509619 | 425.0739891 | 451.6148501 | -0.16453278  | 0.270110167 | 0.222434488  |
| <b>B7LGF6</b>  | TY-2482_chromosome | + | 2412249 | 2413409 | 2257.07508  | 1959.289253 | 2067.559867 | 5839.977903 | 5365.175403 | 5696.344439 | -1.402074222 | 12.5511971  | 12.00152518  |
| <b>B7LGF8</b>  | TY-2482_chromosome | + | 2413517 | 2414341 | 1336.051562 | 1290.785862 | 1363.366137 | 1379.382815 | 1206.132119 | 1141.195685 | 0.106405292  | 0.476257564 | 0.396867472  |
| <b>B7LGF7</b>  | TY-2482_chromosome | + | 2414544 | 2415467 | 171.5412322 | 168.315965  | 121.5908199 | 162.042938  | 172.052825  | 176.9658898 | -0.19865497  | 0.430460347 | 0.359039185  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LGG0</b> | TY-2482_chromosome | + | 2415521 | 2415775 | 52.51475178 | 63.84836334 | 58.87365272 | 77.16678459 | 93.14873913 | 88.00224545 | -0.592273925 | 2.014969011 | 1.799608642 |
| <b>B7LGG1</b> | TY-2482_chromosome | - | 2415824 | 2418040 | 1452.749724 | 1394.451757 | 1310.609352 | 2881.025621 | 3601.084526 | 3118.425885 | -1.212751733 | 14.45463321 | 13.87263422 |
| <b>B7LGF9</b> | TY-2482_chromosome | - | 2418154 | 2419563 | 2071.476331 | 1785.567703 | 1700.106206 | 2987.348488 | 3109.422859 | 3017.260909 | -0.704999973 | 4.668053018 | 4.320414049 |
| <b>B7LGG3</b> | TY-2482_chromosome | - | 2419641 | 2420375 | 1614.847663 | 1466.745498 | 1297.960335 | 1454.155874 | 1602.036756 | 1465.639103 | -0.057148537 | 0.169369345 | 0.136863319 |
| <b>B7LGG5</b> | TY-2482_chromosome | - | 2420611 | 2422866 | 3804.673872 | 3557.273575 | 3607.73554  | 4504.963846 | 4715.427919 | 4302.403811 | -0.293537373 | 0.926954458 | 0.797702468 |
| <b>D3GV56</b> | TY-2482_chromosome | + | 2422962 | 2423171 | 144.7122828 | 127.4090106 | 159.0723349 | 178.7132073 | 175.3241883 | 168.9352943 | -0.17887423  | 0.697810205 | 0.59260006  |
| <b>D7YH50</b> | TY-2482_chromosome | - | 2423197 | 2423412 | 232.5009861 | 205.6129201 | 258.1418875 | 224.5120904 | 170.0150583 | 182.8991284 | 0.31645856   | 1.115127826 | 0.969399798 |
| <b>B7LGG6</b> | TY-2482_chromosome | - | 2423415 | 2423894 | 531.6450018 | 518.9479501 | 567.2886847 | 251.6397267 | 194.8739164 | 202.1436236 | 1.330729305  | 23.61096151 | 22.91225242 |
| <b>B7LGG7</b> | TY-2482_chromosome | - | 2423950 | 2424339 | 2776.686365 | 3224.069052 | 3012.843349 | 606.7550823 | 699.4742944 | 661.1155375 | 2.167053994  | 80.2213956  | 79.07942353 |
| <b>B7LGG8</b> | TY-2482_chromosome | + | 2424491 | 2425147 | 471.4412934 | 472.7475278 | 478.4228396 | 283.3724223 | 276.4223022 | 276.1299799 | 0.767623051  | 9.720285978 | 9.221217881 |
| <b>B7LGG9</b> | TY-2482_chromosome | + | 2425147 | 2426493 | 744.6650091 | 803.4526729 | 754.4006918 | 574.7260646 | 558.003051  | 548.6000243 | 0.430889073  | 4.576291714 | 4.233085343 |
| <b>B7LGH1</b> | TY-2482_chromosome | + | 2427193 | 2427771 | 620.1324729 | 561.2403183 | 494.8278527 | 469.4746925 | 481.281986  | 484.8192817 | 0.213582484  | 1.196046682 | 1.043697435 |
| <b>B7LGH2</b> | TY-2482_chromosome | + | 2427805 | 2428116 | 3076.238076 | 2713.997761 | 2768.768637 | 3442.226047 | 3091.589503 | 3423.104168 | -0.199873325 | 0.618578214 | 0.521602947 |
| <b>B7LGH0</b> | TY-2482_chromosome | - | 2428170 | 2430059 | 3176.089207 | 3348.272615 | 3163.820138 | 6530.256765 | 6610.371061 | 5856.00911  | -0.9926209   | 3.026973162 | 2.754395799 |
| <b>B7LGH4</b> | TY-2482_chromosome | - | 2430091 | 2430669 | 1501.812941 | 1121.505488 | 1059.592381 | 2701.778171 | 2760.729737 | 2626.274063 | -1.111044075 | 18.08519153 | 17.45473146 |
| <b>B7LGH3</b> | TY-2482_chromosome | - | 2430672 | 2431496 | 3476.762374 | 2452.750353 | 2761.675592 | 5175.899636 | 4703.217831 | 4523.770889 | -0.673751234 | 3.510780333 | 3.213388972 |
| <b>B7LGH6</b> | TY-2482_chromosome | - | 2431524 | 2431943 | 1118.955281 | 899.5089398 | 951.3545266 | 1462.223225 | 1430.054436 | 1352.742566 | -0.483642657 | 5.706959576 | 5.317462773 |
| <b>B7LGH7</b> | TY-2482_chromosome | - | 2431947 | 2432573 | 796.2329852 | 777.7047729 | 740.1536416 | 1073.608301 | 1121.749256 | 1083.179869 | -0.509270139 | 5.898084352 | 5.503869242 |
| <b>B7LGH5</b> | TY-2482_chromosome | + | 2432778 | 2434256 | 12573.5706  | 12029.25712 | 12519.64239 | 12557.63721 | 12083.88913 | 11538.25611 | 0.046785135  | 0.039896197 | 0.031609809 |
| <b>C8TWX3</b> | TY-2482_chromosome | + | 2434407 | 2435075 | 5722.976998 | 5690.099086 | 5986.723255 | 4943.882175 | 4668.071788 | 4471.812472 | 0.31206261   | 0.521479198 | 0.435776576 |
| <b>B7LGI0</b> | TY-2482_chromosome | + | 2435084 | 2436241 | 8446.743911 | 8189.199    | 8025.734287 | 6530.677922 | 6297.857805 | 6113.176656 | 0.378203118  | 0.648504735 | 0.547925344 |
| <b>B7LGH8</b> | TY-2482_chromosome | - | 2436285 | 2437097 | 387.4216472 | 481.9306647 | 396.8433515 | 369.033338  | 354.2449165 | 386.4913451 | 0.127708806  | 0.742820577 | 0.63214473  |
| <b>B7LGI2</b> | TY-2482_chromosome | + | 2437213 | 2437983 | 2259.767037 | 2466.007085 | 2542.79049  | 1854.313059 | 1899.799013 | 2069.341765 | 0.320038702  | 2.366659704 | 2.128530945 |
| <b>B7LGI3</b> | TY-2482_chromosome | - | 2438047 | 2438238 | 929.1753476 | 1205.898608 | 1143.428312 | 721.8040591 | 634.35798   | 689.2161541 | 0.639393888  | 8.49164174  | 8.023816084 |
| <b>B7LGI1</b> | TY-2482_chromosome | - | 2438478 | 2439128 | 2253.613006 | 1817.110817 | 2043.057834 | 3203.079841 | 3251.748886 | 2972.764898 | -0.58282714  | 3.671186616 | 3.367888759 |
| <b>D3GVV8</b> | TY-2482_chromosome | + | 2439442 | 2439789 | 1345.286495 | 1319.731558 | 1095.451385 | 1467.989956 | 1476.648341 | 1711.402297 | -0.334702381 | 2.69540452  | 2.038873981 |
| <b>B7LGI6</b> | TY-2482_chromosome | + | 2440075 | 2440623 | 67.76100605 | 61.45865511 | 54.9968549  | 50.11085476 | 64.93315821 | 67.23225405 | 0.013079489  | 0.013763695 | 0.010676902 |
| <b>B7LGI4</b> | TY-2482_chromosome | + | 2440677 | 2443187 | 22.2102742  | 32.53541849 | 38.13561783 | 97.14491034 | 121.1401726 | 103.8230645 | -1.797156166 | 12.02778406 | 11.48726837 |
| <b>B7LGY1</b> | TY-2482_chromosome | + | 2443206 | 2443952 | 15.84732653 | 12.46853983 | 11.74046389 | 22.25938992 | 42.60029529 | 30.15911799 | -1.23197512  | 2.961699907 | 2.692531339 |
| <b>B7LGY2</b> | TY-2482_chromosome | + | 2443957 | 2445018 | 111.0160189 | 117.7600482 | 130.39672   | 116.5204997 | 152.6621448 | 161.3432832 | -0.240497885 | 0.799292983 | 0.682968065 |
| <b>B7LGY3</b> | TY-2482_chromosome | - | 2445067 | 2445264 | 590.358161  | 693.9625419 | 572.2140215 | 246.8591487 | 269.409295  | 283.4732088 | 1.161791587  | 20.66282372 | 20.00396327 |
| <b>B7LGY5</b> | TY-2482_chromosome | + | 2445533 | 2446159 | 183.5165416 | 200.4552997 | 154.3558999 | 242.8132873 | 256.9800524 | 244.7966164 | -0.526446412 | 2.665571205 | 2.410403085 |
| <b>B7LGY6</b> | TY-2482_chromosome | + | 2446189 | 2447847 | 325.3419658 | 348.6242358 | 336.2306408 | 548.6593216 | 537.3788281 | 548.7748292 | -0.709303059 | 8.013612413 | 7.557879265 |
| <b>D3QRZ7</b> | TY-2482_chromosome | + | 2447869 | 2448198 | 190.897794  | 153.6843359 | 154.1058732 | 230.2610007 | 247.2303797 | 299.7031173 | -0.60729539  | 3.93156239  | 3.616564464 |
| <b>rygD</b>   | TY-2482_chromosome | - | 2448074 | 2448223 | 163.1010241 | 117.5381304 | 132.4210427 | 170.093711  | 186.5959406 | 210.5614726 | -0.39788375  | 1.955308067 | 1.743888845 |
| <b>D3QRZ7</b> | TY-2482_chromosome | + | 2448185 | 2448574 | 348.2614072 | 256.4550145 | 279.0343753 | 317.9452259 | 323.9597586 | 262.5314676 | 0.007216028  | 0.050446867 | 0.039701251 |
| <b>rygD</b>   | TY-2482_chromosome | - | 2448451 | 2448599 | 346.83872   | 281.3472426 | 276.2928199 | 254.4649138 | 235.955637  | 197.5800867 | 0.406419067  | 2.167327181 | 1.941516501 |
| <b>B7LGY7</b> | TY-2482_chromosome | - | 2448647 | 2450077 | 3044.922195 | 3595.753969 | 3324.623651 | 2180.096178 | 2058.347615 | 1754.173715 | 0.691205715  | 4.790266972 | 4.436973809 |
| <b>B7LGY4</b> | TY-2482_chromosome | - | 2450128 | 2452965 | 3081.88947  | 3325.286128 | 3086.259002 | 2520.780147 | 2415.884848 | 2068.200175 | 0.408197645  | 2.036165184 | 1.819763018 |
| <b>B7LGY8</b> | TY-2482_chromosome | - | 2452991 | 2454289 | 1629.393889 | 2032.827476 | 1797.444194 | 1036.594652 | 863.2929467 | 775.3567744 | 0.968655296  | 17.78261759 | 17.15364103 |
| <b>D8E4T8</b> | TY-2482_chromosome | - | 2454298 | 2454537 | 244.9986882 | 223.6193855 | 217.2156755 | 1139.472785 | 1275.838526 | 1265.748747 | -2.416276066 | 85.02188193 | 83.84735382 |
| <b>B7LZG0</b> | TY-2482_chromosome | + | 2454531 | 2455148 | 818.076662  | 643.7804194 | 658.4060634 | 4397.62946  | 5005.956748 | 5485.184247 | -2.773241309 | 46.16110228 | 45.24815754 |
| <b>B7LZG2</b> | TY-2482_chromosome | + | 2455215 | 2456450 | 3123.993102 | 3046.298009 | 3245.433442 | 4933.129435 | 5358.548423 | 5378.800748 | -0.717364911 | 2.877930162 | 2.612624876 |
| <b>B7LZG1</b> | TY-2482_chromosome | - | 2456619 | 2457437 | 1239.037856 | 1370.789868 | 1370.505191 | 1733.344    | 1728.780424 | 2034.182194 | -0.470928966 | 4.438353659 | 4.100861772 |
| <b>B7LZG4</b> | TY-2482_chromosome | - | 2457531 | 2457896 | 275.5283728 | 354.9541166 | 311.8164991 | 373.9939578 | 361.1547255 | 361.7506693 | -0.27496864  | 1.075114167 | 0.933142091 |
| <b>B7LZG5</b> | TY-2482_chromosome | + | 2458001 | 2458615 | 623.0406057 | 462.7480418 | 524.5716635 | 643.1307035 | 659.2988668 | 761.6492445 | -0.298072438 | 2.245814513 | 2.016625235 |
| <b>B7LZG3</b> | TY-2482_chromosome | - | 2458634 | 2459563 | 666.0824059 | 921.2039703 | 858.916628  | 448.3541957 | 200.0648143 | 199.313744  | 1.85912424   | 42.39253796 | 41.51182875 |
| <b>B7LZG7</b> | TY-2482_chromosome | + | 2459770 | 2460678 | 42.22626603 | 50.22101318 | 34.99638499 | 36.62928564 | 40.69824808 | 43.58086758 | 0.000532399  | 0.056446749 | 0.044775003 |
| <b>B7LZG8</b> | TY-2482_chromosome | + | 2460678 | 2461280 | 27.07304419 | 31.70305637 | 13.8397898  | 21.2384965  | 23.57418956 | 23.54472181 | -0.043021087 | 0.07876608  | 0.062365626 |
| <b>B7LZG6</b> | TY-2482_chromosome | + | 2461332 | 2462792 | 164.1742129 | 183.8602379 | 145.6202557 | 350.3398245 | 393.5525087 | 365.4269271 | -1.223496655 | 14.4435955  | 13.86192866 |
| <b>B7LZG9</b> | TY-2482_chromosome | - | 2462841 | 2463851 | 1367.044649 | 1383.621755 | 1396.485455 | 2145.735174 | 2559.807798 | 2314.229796 | -0.757372291 | 10.71325965 | 10.19223291 |
| <b>Q1R6R6</b> | TY-2482_chromosome | - | 2463863 | 2464146 | 4923.649592 | 5607.435012 | 5180.940332 | 10107.09778 | 11721.74576 | 11373.89451 | -1.106932217 | 3.078706788 | 2.803022051 |
| <b>B7LH01</b> | TY-2482_chromosome | + | 2464088 | 2464300 | 8232.929918 | 9391.265322 | 8975.225595 | 17366.99278 | 20108.88656 | 19643.3193  | -1.123148498 | 2.840611803 | 2.577544329 |
| <b>B7LH02</b> | TY-2482_chromosome | + | 2464414 | 2466156 | 3483.22     | 3598.935377 | 3456.891236 | 7675.972752 | 9859.155713 | 8728.335883 | -1.325928209 | 4.65722156  | 4.310163328 |
| <b>B7LH00</b> | TY-2482_chromosome | + | 2466354 | 2468192 | 10416.8869  | 10068.67185 | 10862.94655 | 8008.561673 | 8697.102248 | 8249.50361  | 0.34791388   | 0.507057537 | 0.423680177 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LH04</b> | TY-2482_chromosome | - | 2468276 | 2468779 | 833.8537967 | 823.2471885 | 844.7685626 | 586.7884087 | 624.2065978 | 583.1048148 | 0.485171576  | 5.439764433 | 5.059344346  |
| <b>ileX</b>   | TY-2482_chromosome | + | 2468904 | 2468979 | 29.94623808 | 47.37271219 | 33.26780905 | 31.92513312 | 38.70184257 | 23.91058942 | 0.108267902  | 0.296876204 | 0.245020077  |
| <b>B7LH05</b> | TY-2482_chromosome | - | 2469036 | 2469797 | 945.7905663 | 885.5727861 | 925.2577223 | 400.1306042 | 467.5973779 | 416.4349203 | 1.11766576   | 23.76865197 | 23.06732664  |
| <b>B7LH06</b> | TY-2482_chromosome | - | 2470074 | 2470694 | 924.0448739 | 739.2362093 | 824.7563712 | 3439.025341 | 3261.458119 | 3258.427446 | -1.958724252 | 61.2787096  | 60.25804198  |
| <b>B7LH07</b> | TY-2482_chromosome | + | 2470854 | 2472371 | 663.4460076 | 746.0248373 | 658.2742228 | 31263.79168 | 25087.16212 | 23844.34629 | -5.324362213 | 36.50895265 | 35.66740696  |
| <b>D6JEV2</b> | TY-2482_chromosome | + | 2472647 | 2472850 | 68.95783903 | 97.2863845  | 73.54180334 | 67.93617166 | 62.00609772 | 43.48410403 | 0.363921184  | 1.25000892  | 1.0963687818 |
| <b>B7LH08</b> | TY-2482_chromosome | + | 2472789 | 2474165 | 742.1296231 | 610.7798642 | 673.8848179 | 413.6762206 | 418.2838312 | 351.4922769 | 0.809048814  | 10.20073515 | 9.689981296  |
| <b>A1AFZ4</b> | TY-2482_chromosome | + | 2474152 | 2474559 | 92.10784496 | 83.68818511 | 75.1350013  | 47.43564956 | 35.4445913  | 39.40276855 | 1.021614984  | 5.578350026 | 5.193098559  |
| <b>B7LH10</b> | TY-2482_chromosome | + | 2474761 | 2475741 | 999.3572867 | 850.6826924 | 1032.670898 | 1156.075793 | 950.7376612 | 959.4698445 | -0.042557621 | 0.322105654 | 0.265998712  |
| <b>B7LH11</b> | TY-2482_chromosome | + | 2475928 | 2479017 | 262.1884298 | 161.9320202 | 238.2313136 | 338.6295801 | 329.8331175 | 252.5886774 | -0.376950039 | 2.152433449 | 1.928229375  |
| <b>B7LH12</b> | TY-2482_chromosome | + | 2479017 | 2479463 | 47.10827741 | 41.89413693 | 48.71275584 | 34.68154652 | 32.89187987 | 36.0386153  | 0.441292291  | 0.976213648 | 0.841894536  |
| <b>B7LH09</b> | TY-2482_chromosome | + | 2479529 | 2480959 | 62.33447124 | 71.54885884 | 74.45600098 | 43.06281159 | 31.02896297 | 28.28661375 | 1.003849526  | 4.662185474 | 4.314740171  |
| <b>B7LH14</b> | TY-2482_chromosome | + | 2481096 | 2482163 | 61.25413177 | 89.20589383 | 83.04537294 | 27.38301639 | 35.8696423  | 29.72004334 | 1.274363205  | 7.20238103  | 6.771278182  |
| <b>B7LH15</b> | TY-2482_chromosome | + | 2482183 | 2484531 | 244.9595563 | 232.6992509 | 205.923539  | 135.9819114 | 138.0598896 | 136.2048526 | 5.637985632  | 5.637985632 | 5.250073618  |
| <b>D7YDGO</b> | TY-2482_chromosome | + | 2484581 | 2484805 | 20.74330212 | 17.60162431 | 16.07315944 | 16.72179452 | 19.33970924 | 20.48016358 | -0.056825326 | 0.029719388 | 0.023409914  |
| <b>B7LH13</b> | TY-2482_chromosome | - | 2484860 | 2486875 | 171.241797  | 193.3012628 | 196.6218321 | 149.0330858 | 144.3345262 | 136.8931791 | 0.369735203  | 1.77479322  | 1.575793225  |
| <b>E6ARB5</b> | TY-2482_chromosome | - | 2486926 | 2487348 | 241.1204897 | 242.5469072 | 298.1951335 | 233.1761406 | 289.905878  | 247.4232086 | 0.05945816   | 0.070241428 | 0.05537415   |
| <b>B7LH19</b> | TY-2482_chromosome | - | 2487613 | 2488746 | 452.5321818 | 560.676717  | 485.7718405 | 1730.954098 | 2319.497765 | 2207.86746  | -2.108430011 | 59.38945844 | 58.38137994  |
| <b>D3GWQ3</b> | TY-2482_chromosome | + | 2488795 | 2489331 | 365.7196634 | 391.1946706 | 338.0099507 | 380.9754221 | 432.5550049 | 409.7251382 | -0.19386043  | 0.732164564 | 0.622940446  |
| <b>B7LH21</b> | TY-2482_chromosome | + | 2489411 | 2490091 | 92.74751311 | 102.4736376 | 87.91950649 | 179.6970985 | 206.6525736 | 209.7566866 | -1.10826632  | 8.783750068 | 8.308711764  |
| <b>B7LH22</b> | TY-2482_chromosome | + | 2490155 | 2491156 | 1201.328447 | 1275.994944 | 1204.109121 | 1279.264558 | 1102.950272 | 1236.241778 | 0.006132476  | 0.079455257 | 0.062602836  |
| <b>sraF</b>   | TY-2482_chromosome | + | 2491236 | 2491423 | 375.3616774 | 283.9838063 | 110.0957662 | 231.0992186 | 308.684862  | 292.6289997 | -0.19471116  | 0.17885661  | 0.144565488  |
| <b>B7LH23</b> | TY-2482_chromosome | + | 2491442 | 2492404 | 289.4714752 | 318.6729914 | 277.5921779 | 382.01041   | 414.0159676 | 463.287349  | -0.538673317 | 3.938696673 | 3.623339231  |
| <b>B7LH24</b> | TY-2482_chromosome | + | 2492806 | 2494047 | 1656.207376 | 1650.044237 | 1617.867466 | 2068.239094 | 2213.598263 | 2167.490408 | -0.391398711 | 3.422719253 | 3.130814512  |
| <b>B7LH25</b> | TY-2482_chromosome | - | 2494058 | 2494606 | 64.5920177  | 106.3686631 | 81.94792188 | 194.4241218 | 228.2040759 | 184.05007   | -1.368395046 | 9.766658026 | 9.267040536  |
| <b>B7LH26</b> | TY-2482_chromosome | - | 2494692 | 2496176 | 794.4761941 | 672.5610575 | 797.1463322 | 2368.06527  | 2222.461452 | 2239.613918 | -1.546078498 | 41.90542817 | 41.02669753  |
| <b>B7LH20</b> | TY-2482_chromosome | - | 2496194 | 2497603 | 1048.612557 | 1072.947085 | 1120.497272 | 2116.644858 | 1862.323653 | 1843.471104 | -0.843409193 | 13.32613903 | 12.76363296  |
| <b>B7LH28</b> | TY-2482_chromosome | + | 2497966 | 2499381 | 554.591927  | 371.2841552 | 472.6805998 | 1005.37598  | 889.8251346 | 1007.535137 | -0.970423291 | 15.26150169 | 14.6639422   |
| <b>B7LH29</b> | TY-2482_chromosome | - | 2499475 | 2500560 | 166.1470369 | 212.9092046 | 151.4782431 | 109.3839418 | 120.6690359 | 115.0503327 | 0.526196871  | 3.106944734 | 2.830109548  |
| <b>B7LH30</b> | TY-2482_chromosome | - | 2500560 | 2503259 | 139.6890104 | 155.7225576 | 118.414252  | 115.0358675 | 125.2718464 | 144.7790957 | 0.048436093  | 0.192089034 | 0.155643003  |
| <b>B7LH27</b> | TY-2482_chromosome | - | 2503336 | 2503833 | 104.6904737 | 141.8147827 | 109.4924134 | 47.2286494  | 70.05182841 | 76.86509882 | 0.80316559   | 4.20572427  | 3.879693137  |
| <b>B7LH32</b> | TY-2482_chromosome | - | 2503866 | 2504579 | 24.20952768 | 28.65007093 | 17.77508565 | 19.39484841 | 38.26235496 | 28.97778454 | -0.376676532 | 0.386442581 | 0.319611773  |
| <b>B7LH33</b> | TY-2482_chromosome | + | 2504875 | 2505648 | 3957.722192 | 3906.250203 | 3952.46337  | 3420.061585 | 3375.249045 | 3395.276024 | 0.21704765   | 0.587009882 | 0.494255829  |
| <b>B7LH34</b> | TY-2482_chromosome | + | 2505996 | 2506655 | 2041.933463 | 2346.117237 | 2146.583181 | 2016.285736 | 2187.594657 | 2158.804943 | 0.006584566  | 0.124117734 | 0.099693135  |
| <b>B7LH35</b> | TY-2482_chromosome | + | 2506662 | 2507042 | 1028.562375 | 967.8705028 | 955.6085616 | 1205.250797 | 1232.761815 | 1262.012426 | -0.319831043 | 2.6560589   | 2.656054211  |
| <b>D3GWR6</b> | TY-2482_chromosome | + | 2507177 | 2507557 | 6067.503453 | 5808.391858 | 6454.970084 | 2947.70801  | 2798.052031 | 2478.974478 | 1.175141275  | 4.118840942 | 3.796595547  |
| <b>B7LH37</b> | TY-2482_chromosome | + | 2507598 | 2507900 | 6792.284376 | 6529.544799 | 6868.93645  | 3131.610829 | 3152.198173 | 2988.089099 | 1.135021635  | 3.85604007  | 3.544977294  |
| <b>B7LH36</b> | TY-2482_chromosome | + | 2507906 | 2508307 | 6561.427416 | 6202.247617 | 6590.206081 | 3149.893165 | 3330.396472 | 2940.477877 | 1.053640527  | 3.396476703 | 3.105252942  |
| <b>B7LH39</b> | TY-2482_chromosome | + | 2508300 | 2508596 | 4471.23797  | 4312.367492 | 4403.605545 | 2070.84533  | 2258.442569 | 1932.635597 | 1.079486776  | 8.058487578 | 7.601759482  |
| <b>D3GWS0</b> | TY-2482_chromosome | + | 2508695 | 2509174 | 362.459285  | 390.7148517 | 330.8740422 | 397.4972056 | 505.6075495 | 519.4051319 | -0.424432588 | 2.492676959 | 2.246955445  |
| <b>B7LH38</b> | TY-2482_chromosome | + | 2509247 | 2510230 | 419.2211617 | 381.4309185 | 425.118801  | 338.735433  | 410.8702894 | 328.6136328 | 0.212380081  | 0.856328295 | 0.73347251   |
| <b>B7LH42</b> | TY-2482_chromosome | + | 2510526 | 2510888 | 2077.969398 | 2354.844553 | 2500.95373  | 554.6563846 | 538.6416046 | 657.2637613 | 1.990619734  | 68.96038851 | 67.88639603  |
| <b>E1U309</b> | TY-2482_chromosome | + | 2511001 | 2511695 | 544.6114237 | 560.5310271 | 546.0300175 | 497.0206371 | 534.9200818 | 581.0049761 | 0.030496685  | 0.103939953 | 0.082358986  |
| <b>B7LH41</b> | TY-2482_chromosome | - | 2511745 | 2512638 | 1413.044154 | 1603.478941 | 1587.443236 | 804.2252635 | 808.3839253 | 721.8465427 | 0.959521457  | 20.62724632 | 19.96957409  |
| <b>B7LH45</b> | TY-2482_chromosome | + | 2512743 | 2513441 | 208.5107965 | 245.678566  | 217.0966457 | 91.70071299 | 95.40799775 | 89.09850835 | 1.236199555  | 14.03572427 | 13.46162775  |
| <b>B7LH44</b> | TY-2482_chromosome | - | 2513695 | 2515002 | 1011.65431  | 1233.377425 | 1092.036758 | 408.9494758 | 381.2843244 | 369.8374025 | 1.473228341  | 42.20852597 | 41.32847729  |
| <b>B7LH48</b> | TY-2482_chromosome | - | 2515033 | 2516298 | 1831.875675 | 1915.051544 | 1798.958556 | 127.2554346 | 109.8472389 | 120.6381683 | 3.934851722  | 245.7114464 | 243.9576545  |
| <b>B7LH49</b> | TY-2482_chromosome | - | 2516639 | 2518000 | 148.2559931 | 160.2759168 | 159.4045588 | 147.5919631 | 133.7440267 | 191.3554543 | -0.014686401 | 0.027226247 | 0.021534232  |
| <b>B7LH50</b> | TY-2482_chromosome | - | 2518075 | 2518461 | 81.36541953 | 87.14174597 | 79.19236947 | 76.58841091 | 63.4687253  | 60.24975879 | 0.27329287   | 0.804537706 | 0.687529934  |
| <b>B7LH51</b> | TY-2482_chromosome | - | 2518478 | 2520769 | 373.5808692 | 511.9040902 | 511.0062788 | 400.6869012 | 345.6545444 | 372.3957274 | 0.283808972  | 1.610083856 | 1.422220228  |
| <b>B7LH47</b> | TY-2482_chromosome | - | 2520806 | 2522023 | 263.2329537 | 363.787547  | 397.1857878 | 373.5826549 | 359.0142312 | 365.023892  | -0.115259783 | 0.319677254 | 0.26416388   |
| <b>B7LH53</b> | TY-2482_chromosome | - | 2522040 | 2523368 | 920.1721904 | 881.4798791 | 1025.413293 | 802.9323491 | 731.2759507 | 827.5874248 | 0.2941666193 | 1.893625889 | 1.686432725  |
| <b>B7LH54</b> | TY-2482_chromosome | - | 2523393 | 2524379 | 1133.519654 | 1255.148774 | 1324.338558 | 661.5114954 | 587.485295  | 742.8493869 | 0.902910939  | 15.08128101 | 14.48749355  |
| <b>B7LH55</b> | TY-2482_chromosome | - | 2524481 | 2525416 | 723.8505167 | 877.2621352 | 747.3521084 | 696.5541906 | 433.9304193 | 336.9906803 | 0.600502932  | 4.054655497 | 3.733504963  |
| <b>B7LH52</b> | TY-2482_chromosome | + | 2526205 | 2526741 | 16.93947521 | 27.87819801 | 21.55778777 | 19.07094114 | 40.61156299 | 35.92244687 | -0.601930477 | 0.880733466 | 0.755605502  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LF78</b> | TY-2482_chromosome | + | 2528291 | 2529268 | 1138.161235 | 1221.602556 | 1239.762212 | 1493.832549 | 1417.337595 | 1375.804191 | -0.260003059 | 1.926583136 | 1.717845188 |
| <b>A1AG32</b> | TY-2482_chromosome | + | 2529684 | 2530211 | 385628.168  | 364949.9097 | 360676.9261 | 254414.6968 | 311443.0073 | 336618.9346 | 0.313416384  | 0.361147261 | 0.298557447 |
| <b>rnxB</b>   | TY-2482_chromosome | - | 2529733 | 2530109 | 385530.647  | 364822.1379 | 360547.6206 | 253620.6283 | 310738.0637 | 335960.5903 | 0.316455471  | 0.36596215  | 0.302366326 |
| <b>B7LH60</b> | TY-2482_chromosome | - | 2530145 | 2531368 | 1596.850738 | 1745.549793 | 1972.074808 | 9767.342561 | 9293.499626 | 8700.811815 | -2.374246506 | 13.38913165 | 12.82567145 |
| <b>B7LH61</b> | TY-2482_chromosome | - | 2531387 | 2532274 | 2243.925762 | 2681.172165 | 2769.632967 | 9387.561011 | 8806.316831 | 8172.226993 | -1.794334591 | 7.960589369 | 7.506096708 |
| <b>B7LH62</b> | TY-2482_chromosome | - | 2532307 | 2533074 | 1892.822154 | 2237.110344 | 2331.416964 | 5725.091691 | 5399.7868   | 5370.172651 | -1.364023188 | 11.15743883 | 10.62801408 |
| <b>B7LH59</b> | TY-2482_chromosome | - | 2533093 | 2534424 | 2112.13445  | 2670.926651 | 2306.108034 | 3858.924235 | 3373.071904 | 3764.219457 | -0.691114338 | 3.061467036 | 2.787256985 |
| <b>B7LH63</b> | TY-2482_chromosome | + | 2534798 | 2536366 | 4127.138845 | 4174.388387 | 4687.653193 | 9427.58634  | 8018.167226 | 8625.181132 | -0.986255846 | 2.87660779  | 2.611622899 |
| <b>D7ZZI1</b> | TY-2482_chromosome | + | 2536464 | 2536850 | 424.9187588 | 482.314122  | 501.1135623 | 867.3003932 | 869.2679274 | 916.3464876 | -0.917915727 | 15.20799561 | 14.6114681  |
| <b>B7LH64</b> | TY-2482_chromosome | + | 2536853 | 2537314 | 533.7268082 | 573.1962699 | 633.1715064 | 918.9259678 | 965.0030295 | 1032.991891 | -0.29625022  | 10.80648736 | 10.28314437 |
| <b>B7LH66</b> | TY-2482_chromosome | - | 2537375 | 2538181 | 995.4805701 | 1158.980221 | 1167.81398  | 693.7582332 | 592.4500617 | 607.8896683 | 0.791143907  | 12.87477206 | 12.32013672 |
| <b>B7LH67</b> | TY-2482_chromosome | + | 2538430 | 2539707 | 173.2661844 | 133.9533664 | 158.029612  | 114.3337992 | 93.40603604 | 101.6200169 | 0.638236001  | 3.186964967 | 2.9058298   |
| <b>Q9KIQ4</b> | TY-2482_chromosome | + | 2539697 | 2540203 | 56.55721002 | 61.77599612 | 42.34547988 | 53.67180213 | 48.18985917 | 31.41764412 | 0.18275466   | 0.46955127  | 0.391100194 |
| <b>B7LH70</b> | TY-2482_chromosome | + | 2540217 | 2540993 | 53.88614017 | 59.64889533 | 56.07153131 | 50.87115642 | 51.93542126 | 54.4590218  | 0.08695357   | 0.158666933 | 0.127938695 |
| <b>B7LH71</b> | TY-2482_chromosome | + | 2540980 | 2541861 | 111.3291623 | 136.4436436 | 136.2214069 | 58.69391065 | 62.47830549 | 51.97105716 | 1.121234967  | 8.374215738 | 7.907920188 |
| <b>B7LH68</b> | TY-2482_chromosome | + | 2541882 | 2542313 | 89.00674229 | 124.0596206 | 125.9398856 | 58.34504897 | 63.95505143 | 61.67182654 | 0.850875992  | 4.719581409 | 4.369416901 |
| <b>B7LH73</b> | TY-2482_chromosome | + | 2542292 | 2543443 | 219.9198792 | 243.3980205 | 245.5237984 | 196.7765169 | 202.0591465 | 181.9180475 | 0.274565295  | 1.246417267 | 1.090470073 |
| <b>B7LH74</b> | TY-2482_chromosome | + | 2543796 | 2544947 | 104.3751149 | 51.4172663  | 90.30412898 | 81.48483015 | 83.76506908 | 90.99184446 | 0.086528027  | 0.049351899 | 0.038873734 |
| <b>B7LH72</b> | TY-2482_chromosome | + | 2544963 | 2545820 | 59.98410209 | 52.8876822  | 58.8664192  | 103.8559513 | 125.4698159 | 119.3411237 | -0.990668456 | 5.924712056 | 5.530065456 |
| <b>B7LH77</b> | TY-2482_chromosome | + | 2546505 | 2547305 | 22.50343882 | 4.74596549  | 25.34883871 | 21.61779429 | 26.98010088 | 21.29941351 | -0.122612302 | 0.547902978 | 0.459116091 |
| <b>B7LH75</b> | TY-2482_chromosome | + | 2547298 | 2548086 | 29.49640215 | 32.61332572 | 31.58914615 | 34.75435624 | 42.03624253 | 46.07953232 | -0.4023081   | 0.764730839 | 0.651804174 |
| <b>B7LH79</b> | TY-2482_chromosome | + | 2548090 | 2548842 | 21.10902875 | 18.71188495 | 21.49205299 | 46.43253491 | 45.8504581  | 52.86145036 | -1.213735742 | 4.350672224 | 4.018072788 |
| <b>B7LH78</b> | TY-2482_chromosome | + | 2549245 | 2549826 | 85.87080797 | 98.36195229 | 64.04707642 | 55.66667952 | 72.06059608 | 75.09396173 | 0.209417589  | 0.643369496 | 0.543885426 |
| <b>B7LH81</b> | TY-2482_chromosome | + | 2549909 | 2550601 | 25.30590967 | 4.756264657 | 22.78166877 | 28.18653531 | 42.39756956 | 35.41448634 | -0.715076881 | 2.492067394 | 2.246499044 |
| <b>B7LH82</b> | TY-2482_chromosome | + | 2550634 | 2553147 | 250.9606637 | 296.8567112 | 282.9517041 | 356.0138371 | 356.3679454 | 399.5894205 | -0.444583937 | 2.797364417 | 2.536205933 |
| <b>B7LH80</b> | TY-2482_chromosome | + | 2553161 | 2554249 | 299.1051722 | 338.4663675 | 263.510148  | 501.4469863 | 503.4319264 | 517.0842475 | 0.170842475  | 8.323901734 | 7.85938452  |
| <b>B7LH84</b> | TY-2482_chromosome | - | 2554298 | 2555155 | 748.5429204 | 657.2760511 | 619.675239  | 1122.801016 | 1045.073924 | 1026.382025 | -0.655625565 | 8.677970403 | 8.20526354  |
| <b>B7LH85</b> | TY-2482_chromosome | + | 2555219 | 2557252 | 2612.900771 | 2090.177891 | 2461.000943 | 3220.90516  | 2965.565988 | 2960.492467 | -0.301593398 | 1.41976939  | 1.248995824 |
| <b>B7LH86</b> | TY-2482_chromosome | + | 2557213 | 2557605 | 623.9383467 | 580.0783407 | 604.8873452 | 640.4445848 | 634.391501  | 631.0982218 | -0.060325113 | 0.286467468 | 0.236455297 |
| <b>B7LH87</b> | TY-2482_chromosome | + | 2557628 | 2558215 | 1282.202911 | 1153.973269 | 1284.294385 | 1807.270736 | 1890.753039 | 1941.60029  | -0.566449524 | 7.279110984 | 6.844447788 |
| <b>B7LH83</b> | TY-2482_chromosome | + | 2558228 | 2558800 | 1220.544138 | 1157.643831 | 1214.004174 | 1973.706432 | 2052.303021 | 2095.330092 | -0.752277061 | 11.96664424 | 11.42703365 |
| <b>B7LH89</b> | TY-2482_chromosome | - | 2558920 | 2559957 | 858.175652  | 860.9045755 | 836.3035875 | 628.6308467 | 740.2510228 | 692.4192096 | 0.306304698  | 2.448688579 | 2.206324243 |
| <b>D3GXP1</b> | TY-2482_chromosome | - | 2560033 | 2560710 | 395.7655266 | 479.7719015 | 461.0418735 | 297.6458006 | 324.9258695 | 323.7640219 | 0.470887785  | 3.928740607 | 3.61446082  |
| <b>B7LH91</b> | TY-2482_chromosome | + | 2560793 | 2561308 | 277.0026551 | 349.203226  | 297.5743332 | 776.3620331 | 793.5122985 | 938.0780406 | -1.492164781 | 28.11292513 | 27.36110281 |
| <b>B7LH88</b> | TY-2482_chromosome | - | 2561294 | 2561734 | 489.2084684 | 508.9581811 | 457.1910819 | 1733.07885  | 1660.572245 | 1993.20665  | -1.970341834 | 61.77465033 | 60.74939666 |
| <b>B7LH93</b> | TY-2482_chromosome | + | 2561785 | 2562084 | 1606.416781 | 1755.179342 | 1835.867052 | 2020.60821  | 1719.654604 | 2013.991483 | -0.146952732 | 0.708743414 | 0.602312249 |
| <b>B7LH94</b> | TY-2482_chromosome | - | 2562077 | 2562577 | 8530.30306  | 8984.093207 | 9782.336885 | 10033.50213 | 8746.179426 | 9707.733792 | -0.050949803 | 0.070586007 | 0.055628692 |
| <b>B7LH95</b> | TY-2482_chromosome | - | 2562574 | 2563095 | 11148.65946 | 11517.83464 | 12655.79831 | 11511.9584  | 9353.402493 | 11567.99258 | 0.139398441  | 0.146796056 | 0.118210187 |
| <b>B7LH96</b> | TY-2482_chromosome | + | 2563304 | 2564296 | 1724.877409 | 1751.976278 | 1947.841744 | 4635.683145 | 2776.075982 | 2887.868987 | -0.921635327 | 5.654530243 | 5.266098671 |
| <b>D3GXP8</b> | TY-2482_chromosome | + | 2564290 | 2565183 | 1072.360731 | 926.9937273 | 1041.531225 | 3558.266435 | 2571.21376  | 2848.959481 | -1.531594891 | 32.46872122 | 31.66752365 |
| <b>B7LH98</b> | TY-2482_chromosome | + | 2565392 | 2566396 | 1146.666537 | 906.2564133 | 1018.711644 | 750.7401821 | 728.8219762 | 704.1368918 | 0.536524374  | 5.376942425 | 4.999021881 |
| <b>B7LH97</b> | TY-2482_chromosome | + | 2566520 | 2567761 | 855.7448558 | 693.9678815 | 744.4036083 | 1496.773979 | 1529.675641 | 1682.195931 | -0.997386694 | 20.42308874 | 19.76778324 |
| <b>B7LHA0</b> | TY-2482_chromosome | - | 2567918 | 2569804 | 196991.1788 | 18559.1999  | 21781.83558 | 35100.60665 | 41368.18388 | 38209.89498 | -0.894798251 | 1.98363205  | 1.769942002 |
| <b>B7LHA1</b> | TY-2482_chromosome | - | 2569987 | 2570868 | 28133.07591 | 28315.69605 | 27892.75783 | 33424.34645 | 34305.21071 | 34341.36014 | -0.278058324 | 0.351409818 | 0.290725027 |
| <b>B7LH99</b> | TY-2482_chromosome | - | 2570980 | 2573112 | 53452.76047 | 52655.78722 | 56785.12072 | 43817.25226 | 43077.08701 | 42519.45027 | 0.347140159  | 0.433277394 | 0.361035065 |
| <b>sraG</b>   | TY-2482_chromosome | + | 2573169 | 2573342 | 2151.607672 | 1958.062104 | 2017.270024 | 1736.195384 | 2356.60423  | 2123.861216 | 0.000302278  | 0.059512132 | 0.047337327 |
| <b>B7LGI7</b> | TY-2482_chromosome | - | 2573362 | 2573628 | 35564.102   | 34356.33942 | 36224.19074 | 17163.14551 | 19081.86863 | 19713.00147 | 0.942055525  | 1.985676464 | 1.771701726 |
| <b>B7LHN1</b> | TY-2482_chromosome | - | 2573780 | 2574721 | 9690.631529 | 9967.387377 | 10622.94441 | 4086.683873 | 4199.074041 | 4154.92332  | 1.293075559  | 4.299939703 | 3.970880983 |
| <b>D3GXQ8</b> | TY-2482_chromosome | - | 2574724 | 2575149 | 4554.662759 | 4679.560193 | 5223.546582 | 1682.98343  | 1656.40306  | 1755.149529 | 1.524980571  | 14.84657671 | 14.25788068 |
| <b>B7LHN3</b> | TY-2482_chromosome | - | 2575289 | 2577958 | 53620.49498 | 57692.22192 | 59737.5911  | 17897.43672 | 19200.87865 | 17239.14651 | 1.651354192  | 5.014367769 | 4.651350449 |
| <b>B7LHN0</b> | TY-2482_chromosome | - | 2577986 | 2579470 | 19761.3092  | 20927.04206 | 21626.92027 | 21756.47124 | 26902.17845 | 25497.54761 | -0.24654688  | 0.319516404 | 0.26410188  |
| <b>E6WIP2</b> | TY-2482_chromosome | - | 2579501 | 2580076 | 4269.738777 | 4277.306422 | 4119.267476 | 9227.415443 | 12021.8454  | 12449.87964 | -1.409966804 | 4.805057146 | 4.450978285 |
| <b>metV</b>   | TY-2482_chromosome | - | 2580157 | 2580233 | 2270.79565  | 1826.840897 | 773.9153493 | 4398.235617 | 6986.096798 | 8225.961804 | -2.085482401 | 10.46252154 | 9.948085995 |
| <b>B7LHN6</b> | TY-2482_chromosome | + | 2580581 | 2581921 | 1372.079852 | 1454.559812 | 1430.975477 | 2188.070329 | 2695.224349 | 2231.978699 | -0.751343125 | 9.551910059 | 9.058026815 |
| <b>B7LHN7</b> | TY-2482_chromosome | - | 2581935 | 2583557 | 214.4323104 | 229.4037728 | 187.2874542 | 310.9313657 | 361.5515381 | 362.5884008 | -0.754661051 | 6.158755539 | 5.757146153 |

|               |                    |   |         |         |             |             |             |             |             |             |               |             |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|--------------|
| <b>D3GXR4</b> | TY-2482_chromosome | - | 2583730 | 2583951 | 23.59144677 | 35.27386195 | 32.81065031 | 92.66571934 | 116.3656605 | 129.6916555 | -1.924431327  | 12.87780839 | 12.32286095  |
| <b>leuU</b>   | TY-2482_chromosome | - | 2584014 | 2584100 | 1259.813231 | 1113.807104 | 778.5558378 | 2920.779525 | 4130.896412 | 5549.7279   | -2.023260312  | 18.37888664 | 17.74544428  |
| <b>B7LHN4</b> | TY-2482_chromosome | - | 2584118 | 2584447 | 7850.413326 | 7662.268627 | 7923.52938  | 25691.20695 | 30437.33437 | 38983.03115 | -1.997010345  | 7.257658348 | 6.823965501  |
| <b>B7LHN9</b> | TY-2482_chromosome | - | 2584678 | 2586012 | 6058.818812 | 5177.111196 | 5792.826875 | 5768.057604 | 5548.344754 | 5592.176323 | 0.047308943   | 0.011771448 | 0.009241147  |
| <b>B7LHN8</b> | TY-2482_chromosome | - | 2586008 | 2586853 | 1545.682125 | 1485.242768 | 1561.659832 | 1561.187179 | 1536.684898 | 1431.418443 | 0.030775295   | 0.074236443 | 0.058648375  |
| <b>B7LHP1</b> | TY-2482_chromosome | - | 2586946 | 2588877 | 29288.46601 | 27057.58202 | 27057.79085 | 31537.58846 | 31546.75238 | 30026.84262 | -0.108395058  | 0.141047689 | 0.114131116  |
| <b>B7LHP2</b> | TY-2482_chromosome | - | 2588980 | 2589606 | 6062.992237 | 6400.391041 | 6818.438546 | 7013.745027 | 7455.697926 | 7520.478134 | -0.180934702  | 0.26579318  | 0.218859612  |
| <b>A1AG83</b> | TY-2482_chromosome | - | 2589665 | 2589964 | 4085.707071 | 3784.539999 | 3688.342899 | 4973.606908 | 5557.819393 | 5821.939165 | -0.491414711  | 1.068102985 | 0.92661319   |
| <b>B7LHP0</b> | TY-2482_chromosome | - | 2590184 | 2590657 | 1256.591558 | 1278.316972 | 1314.518877 | 3736.848797 | 4367.507629 | 4530.615119 | -1.705218298  | 22.4034158  | 21.72050098  |
| <b>B7LHP4</b> | TY-2482_chromosome | + | 2590905 | 2592335 | 902.6764531 | 1036.197068 | 1001.321918 | 1915.824759 | 2052.068585 | 1993.89463  | -1.041221897  | 20.20161708 | 19.54905656  |
| <b>B7LHP6</b> | TY-2482_chromosome | - | 2592381 | 2593550 | 2856.559321 | 3325.948539 | 3423.401372 | 2004.272555 | 2055.805967 | 1945.353896 | 0.665430584   | 4.317081218 | 3.987651148  |
| <b>B7LHP7</b> | TY-2482_chromosome | - | 2593569 | 2594531 | 1428.908569 | 1504.478301 | 1464.068923 | 2893.123373 | 3436.354126 | 3118.526303 | -1.112946365  | 12.79945202 | 12.24575165  |
| <b>B7LHP5</b> | TY-2482_chromosome | - | 2594661 | 2594915 | 17103.46985 | 16495.85995 | 17391.53441 | 26553.84323 | 31074.26402 | 29093.43624 | -0.749687408  | 1.506957749 | 1.328511166  |
| <b>D3GX55</b> | TY-2482_chromosome | + | 2594885 | 2595451 | 23518.86952 | 23422.98401 | 24885.4339  | 38722.54458 | 44676.18771 | 43768.77239 | -0.808396355  | 1.616180137 | 1.428048259  |
| <b>B7LHQ0</b> | TY-2482_chromosome | + | 2595506 | 2596474 | 4665.446453 | 3826.501346 | 3926.885588 | 3605.620244 | 3557.368141 | 3564.218915 | 0.238350516   | 0.56420245  | 0.473704477  |
| <b>B7LHQ1</b> | TY-2482_chromosome | + | 2596705 | 2596980 | 180.8775949 | 230.5857468 | 174.3212531 | 406.0154902 | 476.7458828 | 441.4626511 | -1.257146358  | 14.86792494 | 14.27753839  |
| <b>B7LHP8</b> | TY-2482_chromosome | - | 2597034 | 2598290 | 3700.55809  | 3210.403363 | 3629.047388 | 3134.931211 | 3187.223456 | 2799.04196  | 0.242581163   | 0.555015395 | 0.465694518  |
| <b>A7ZS88</b> | TY-2482_chromosome | + | 2598411 | 2598749 | 860.933012  | 716.7409805 | 820.2854073 | 655.0122919 | 650.1243508 | 589.7561887 | 0.379923591   | 2.813394857 | 2.551759912  |
| <b>B7LHQ2</b> | TY-2482_chromosome | - | 2598762 | 2599052 | 1701.701389 | 1532.745966 | 1809.923356 | 1014.090673 | 1019.00363  | 920.313511  | 0.810890298   | 13.35414038 | 12.79099845  |
| <b>B7LHQ5</b> | TY-2482_chromosome | - | 2599055 | 2599687 | 3440.791803 | 3197.756101 | 3534.173747 | 2202.437215 | 2174.104533 | 2002.713062 | 0.696719695   | 4.32361491  | 3.993813172  |
| <b>B7LHQ6</b> | TY-2482_chromosome | - | 2599709 | 2600257 | 1537.060488 | 1358.44995  | 1388.062065 | 1356.564542 | 1299.490492 | 1238.093894 | 0.152303596   | 0.766899442 | 0.653737051  |
| <b>B7LHQ4</b> | TY-2482_chromosome | - | 2600265 | 2601044 | 1543.739124 | 1413.360687 | 1442.598596 | 2016.494372 | 2097.296609 | 2056.945876 | -0.473823732  | 5.093953615 | 4.510595393  |
| <b>B7LHQ8</b> | TY-2482_chromosome | - | 2601055 | 2601861 | 1999.127278 | 1880.586558 | 2040.019803 | 2717.826326 | 2639.614068 | 2681.690169 | -0.419793379  | 2.138287902 | 1.915393918  |
| <b>B7LHQ7</b> | TY-2482_chromosome | + | 2602071 | 2603045 | 1994.298898 | 2113.412973 | 1840.849484 | 1545.986233 | 1625.675306 | 1597.514801 | 0.286078169   | 2.399162558 | 2.159223608  |
| <b>B7LHR0</b> | TY-2482_chromosome | + | 2603062 | 2604045 | 3415.22425  | 3665.570922 | 3647.789719 | 3465.495112 | 3432.707827 | 3508.145745 | 0.035496254   | 0.087613547 | 0.069506666  |
| <b>B7LHR1</b> | TY-2482_chromosome | + | 2604069 | 2604632 | 1872.663989 | 1922.748828 | 1995.479809 | 2899.994247 | 3202.610298 | 3239.930079 | -0.682382879  | 4.51805443  | 4.176952111  |
| <b>B7LHR2</b> | TY-2482_chromosome | + | 2604632 | 2605204 | 1929.511592 | 2091.674688 | 1915.359764 | 3309.310867 | 3494.253488 | 3369.456877 | -0.803383327  | 5.619118885 | 5.23217426   |
| <b>B7LHR3</b> | TY-2482_chromosome | + | 2605176 | 2605730 | 2672.084976 | 2552.479724 | 2759.804173 | 4463.097715 | 4632.736042 | 4242.091539 | -0.722496997  | 3.957323838 | 3.641246471  |
| <b>B7LHR4</b> | TY-2482_chromosome | + | 2605740 | 2606462 | 3164.083377 | 2841.359162 | 2882.25776  | 4806.157534 | 4565.674509 | 4428.139988 | -0.62258308   | 3.032033431 | 2.759130021  |
| <b>B7LHR5</b> | TY-2482_chromosome | + | 2606513 | 2607943 | 9602.428091 | 9350.502275 | 9327.343884 | 10667.95634 | 9882.456735 | 9735.444913 | -0.099245728  | 0.118212995 | 0.094707732  |
| <b>B7LHR6</b> | TY-2482_chromosome | + | 2607969 | 2608253 | 3219.831958 | 3052.892212 | 3357.436654 | 2760.193792 | 2668.181018 | 2657.656229 | 0.274773691   | 0.809937229 | 0.6992245529 |
| <b>B7LHR7</b> | TY-2482_chromosome | + | 2608374 | 2608862 | 2935.352091 | 2747.680098 | 3042.792084 | 3345.752633 | 3110.774044 | 3105.073337 | -0.10782245   | 0.322524671 | 0.266318722  |
| <b>B7LHQ9</b> | TY-2482_chromosome | + | 2608911 | 2609762 | 2541.59928  | 2318.47736  | 2297.558611 | 4179.571345 | 4092.459526 | 3911.132879 | -0.760770853  | 4.439777732 | 4.102096569  |
| <b>B7LHR9</b> | TY-2482_chromosome | + | 2609762 | 2610031 | 409.3322858 | 458.6388993 | 315.6002177 | 938.4663385 | 995.2658594 | 879.8205476 | -1.336010242  | 21.55724528 | 20.88754196  |
| <b>B7LHS0</b> | TY-2482_chromosome | + | 2610247 | 2610876 | 5262.608125 | 4808.438769 | 5108.999501 | 4055.717134 | 3952.131113 | 4068.42757  | 0.597705652   | 0.597705658 | 0.508402386  |
| <b>B7LHS1</b> | TY-2482_chromosome | - | 2610879 | 2611604 | 2028.534445 | 2104.299983 | 2001.508956 | 2041.389134 | 2080.103578 | 1989.12037  | -0.00945714   | 0.013399842 | 0.010446638  |
| <b>B7LHR8</b> | TY-2482_chromosome | - | 2611604 | 2612254 | 2453.150589 | 2529.848718 | 2867.248687 | 1598.617029 | 1570.164438 | 1519.041807 | 0.763154663   | 10.62378416 | 10.10419882  |
| <b>ryhA</b>   | TY-2482_chromosome | + | 2612372 | 2612479 | 443.5757098 | 535.9214944 | 701.3034112 | 389.6357581 | 365.2324044 | 375.141701  | 0.60816928    | 4.24990891  | 3.922332426  |
| <b>B7LHS3</b> | TY-2482_chromosome | - | 2612487 | 2614820 | 7174.479316 | 7344.57517  | 7514.014847 | 5781.515292 | 5222.984122 | 5307.096266 | 0.43291426    | 0.802345285 | 0.685679074  |
| <b>B7LHS4</b> | TY-2482_chromosome | - | 2614919 | 2615845 | 401.8652327 | 407.7304138 | 459.3671849 | 994.8843037 | 586.2644588 | 550.1398882 | -0.74635115   | 5.053164484 | 4.688941348  |
| <b>D6JFL7</b> | TY-2482_chromosome | + | 2615864 | 2616052 | 44.5758918  | 61.3738195  | 51.74493257 | 57.22684822 | 71.85125858 | 80.85474302 | -0.466907223  | 1.104582137 | 0.959583607  |
| <b>D7Z4E7</b> | TY-2482_chromosome | + | 2616240 | 2616473 | 173.0096244 | 221.6239141 | 189.7670594 | 266.97407   | 281.9590825 | 293.024715  | -0.582166021  | 3.541386481 | 3.242439436  |
| <b>B7LHS5</b> | TY-2482_chromosome | + | 2616427 | 2620977 | 3285.293198 | 3642.312088 | 3642.62676  | 3412.77419  | 3312.888557 | 3046.819626 | 0.077460771   | 0.17519107  | 0.171604068  |
| <b>B7LHS6</b> | TY-2482_chromosome | + | 2620993 | 2622408 | 1737.67385  | 1756.276629 | 1814.495405 | 938.3979045 | 929.6434913 | 819.829332  | 0.981944372   | 21.84544375 | 21.17165484  |
| <b>C5W9G1</b> | TY-2482_chromosome | + | 2622595 | 2623071 | 92.92649616 | 115.3543263 | 86.65976383 | 182.0458769 | 233.276356  | 239.4751417 | -1.219295065  | 9.211507088 | 8.725750173  |
| <b>B7LHS7</b> | TY-2482_chromosome | + | 2623055 | 2623393 | 494.5263302 | 476.8288716 | 591.2961839 | 443.0505915 | 459.8912487 | 559.333182  | 0.148407072   | 0.37390043  | 0.308993298  |
| <b>B7LHS9</b> | TY-2482_chromosome | - | 2623475 | 2623936 | 342.9375045 | 339.3564406 | 337.6993769 | 1840.415986 | 1744.892816 | 1820.374434 | -2.6405945143 | 104.0567871 | 102.8118308  |
| <b>B7LHT0</b> | TY-2482_chromosome | - | 2623936 | 2624808 | 482.4499016 | 461.4569445 | 439.9011227 | 2960.19901  | 3032.92729  | 3058.366389 | -2.712278502  | 113.9658515 | 112.6741171  |
| <b>B7LHT1</b> | TY-2482_chromosome | - | 2624808 | 2625494 | 316.3332093 | 216.8679996 | 324.1408044 | 2486.627495 | 2325.286753 | 2311.829691 | -2.952911553  | 121.011042  | 119.6744952  |
| <b>B7LHS8</b> | TY-2482_chromosome | - | 2625545 | 2627032 | 494.1235356 | 499.6011227 | 482.8681342 | 3778.794018 | 3614.643277 | 3855.383405 | -2.936178787  | 127.5897762 | 126.2178375  |
| <b>B7LHT3</b> | TY-2482_chromosome | - | 2627144 | 2628034 | 1271.424089 | 1248.22934  | 1487.899945 | 9116.61648  | 8342.474282 | 8162.261661 | -2.644437043  | 16.28015149 | 16.26430322  |
| <b>B7LHT2</b> | TY-2482_chromosome | - | 2628159 | 2628947 | 2320.924056 | 2223.95536  | 2310.24235  | 1766.907947 | 1483.398018 | 1728.037076 | 0.473574183   | 4.425192421 | 4.088456816  |
| <b>B7LHT5</b> | TY-2482_chromosome | + | 2629375 | 2630739 | 315.0436375 | 329.2431955 | 262.1243097 | 272.1742989 | 267.2085018 | 266.4681175 | 0.121284444   | 0.578011664 | 0.486118452  |
| <b>B7LHT6</b> | TY-2482_chromosome | - | 2630788 | 2631282 | 5969.623297 | 5540.896877 | 5692.399925 | 8205.231904 | 8152.586519 | 7974.600457 | -0.48772694   | 0.965552424 | 0.832298776  |
| <b>B7LHT4</b> | TY-2482_chromosome | - | 2631291 | 2631926 | 9357.053949 | 8758.487752 | 9630.223327 | 13819.19525 | 13490.36648 | 13403.00401 | -0.528931294  | 1.012777434 | 0.875246159  |

|               |                    |   |         |         |             |             |             |             |             |             |               |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|
| <b>Q0TCN7</b> | TY-2482_chromosome | + | 2631868 | 2632074 | 3536.585889 | 3362.58719  | 3420.920244 | 4462.270007 | 4603.726676 | 5124.559692 | -0.445517294  | 1.724382618 | 1.528535161 |
| <b>B7LHT8</b> | TY-2482_chromosome | - | 2632324 | 2632713 | 47240.43002 | 45865.94096 | 45639.2771  | 26370.87535 | 31745.5955  | 30995.97934 | 0.645888779   | 1.088111321 | 0.944810203 |
| <b>B7LHT9</b> | TY-2482_chromosome | - | 2632732 | 2633157 | 51635.58835 | 51055.35421 | 53793.92509 | 31665.49584 | 35725.91438 | 34239.16391 | 0.636113133   | 1.041846458 | 0.902280452 |
| <b>B7LHU0</b> | TY-2482_chromosome | - | 2633379 | 2634503 | 1110.342341 | 1107.342701 | 1198.002419 | 1940.207662 | 1712.068095 | 1729.847072 | -0.644290941  | 9.355901256 | 8.86553021  |
| <b>B7LHU1</b> | TY-2482_chromosome | + | 2634697 | 2635092 | 6704.771185 | 6773.197759 | 7156.178143 | 6410.158642 | 5662.407208 | 5762.02381  | 0.158956665   | 0.198583243 | 0.160984454 |
| <b>B7LHU2</b> | TY-2482_chromosome | + | 2635249 | 2636613 | 1741.496302 | 2063.24576  | 1985.446088 | 1699.507842 | 1684.300246 | 1643.399306 | -0.175672122  | 1.151334259 | 1.002185609 |
| <b>B7LHU3</b> | TY-2482_chromosome | + | 2636706 | 2637770 | 714.1535074 | 876.9850192 | 745.9009044 | 1219.745296 | 1228.166447 | 1227.347359 | -0.709637501  | 8.912538925 | 8.433848875 |
| <b>B7LHU4</b> | TY-2482_chromosome | - | 2637839 | 2638774 | 29273.6787  | 25282.19014 | 28918.33623 | 20740.19949 | 20552.34628 | 17623.68563 | 0.537782003   | 0.800631631 | 0.684079214 |
| <b>B7LHT7</b> | TY-2482_chromosome | + | 2639209 | 2639676 | 951.2893453 | 995.4965314 | 1080.095578 | 1388.20319  | 1435.288031 | 1319.13027  | -0.443938618  | 4.997205538 | 4.634990239 |
| <b>B5YSW4</b> | TY-2482_chromosome | + | 2639993 | 2640304 | 1093.106931 | 1313.668956 | 1302.86995  | 903.1284773 | 1121.967541 | 1156.095342 | 0.207096446   | 1.249274352 | 1.093077922 |
| <b>B7LHU7</b> | TY-2482_chromosome | - | 2640366 | 2640635 | 182.5176758 | 185.8521916 | 216.4790117 | 67.18083918 | 75.0535697  | 66.97315332 | 1.506616543   | 17.28311337 | 16.66147924 |
| <b>B7LHU8</b> | TY-2482_chromosome | - | 2640730 | 2642694 | 253.9850834 | 300.4939139 | 257.4177332 | 338.2149114 | 388.4992379 | 371.1096675 | -0.48234369   | 2.944651924 | 2.67596815  |
| <b>B7LHU9</b> | TY-2482_chromosome | - | 2642703 | 2643632 | 230.5692574 | 245.4332129 | 191.7279358 | 205.7545275 | 267.9137861 | 254.9387307 | -0.265131432  | 0.894234324 | 0.768134061 |
| <b>B5YSW8</b> | TY-2482_chromosome | - | 2643643 | 2643912 | 96.25462809 | 120.8919895 | 92.35768408 | 118.0929541 | 119.2386166 | 139.6163274 | -0.354500631  | 0.934147782 | 0.804426917 |
| <b>B7LHV1</b> | TY-2482_chromosome | + | 2644026 | 2644952 | 1088.078643 | 1232.293253 | 1282.683375 | 995.0036177 | 964.3145065 | 1077.663068 | 0.243983348   | 1.716247628 | 1.52080969  |
| <b>B7LHV2</b> | TY-2482_chromosome | - | 2645086 | 2646528 | 5331.815337 | 6086.826577 | 6121.697037 | 5840.329983 | 5685.264056 | 5483.366088 | 0.028533281   | 0.054240431 | 0.04295942  |
| <b>B7LHU5</b> | TY-2482_chromosome | - | 2646687 | 2650484 | 4814.04444  | 4732.564867 | 4396.708295 | 2796.264118 | 2853.370978 | 2821.175973 | 0.707223904   | 3.789734977 | 3.481688763 |
| <b>B7LHV4</b> | TY-2482_chromosome | - | 2650555 | 2652021 | 2576.683912 | 2815.711188 | 2864.663284 | 1729.142772 | 1651.839956 | 1659.557211 | 0.207403923   | 9.974025772 | 9.46859731  |
| <b>B7LHV5</b> | TY-2482_chromosome | - | 2652014 | 2652604 | 1159.20155  | 1280.415605 | 1181.133262 | 823.5073189 | 767.7049306 | 758.0052514 | 0.593952784   | 8.696715257 | 8.223491376 |
| <b>B7LHV6</b> | TY-2482_chromosome | - | 2652616 | 2653101 | 722.043445  | 854.8182986 | 702.9593874 | 791.1594269 | 826.8270513 | 776.4505655 | -0.130616903  | 0.34269378  | 0.283806072 |
| <b>B7LHV8</b> | TY-2482_chromosome | - | 2653104 | 2654204 | 1798.75049  | 1618.733786 | 1603.641988 | 3526.710708 | 3919.200906 | 3506.439824 | -1.115618253  | 10.66978118 | 10.14990795 |
| <b>B7LHV9</b> | TY-2482_chromosome | - | 2654273 | 2655313 | 3243.948877 | 2909.48753  | 3218.15683  | 7223.063647 | 7392.722423 | 7293.793545 | -0.194201269  | 4.37841265  | 4.043938019 |
| <b>D7X6F8</b> | TY-2482_chromosome | + | 2655282 | 2655470 | 431.3091961 | 502.2561401 | 472.6682272 | 1038.865733 | 1230.814412 | 1345.024176 | -1.382808331  | 29.00786869 | 28.24961227 |
| <b>B7LHW0</b> | TY-2482_chromosome | + | 2655421 | 2655606 | 340.1166634 | 395.4936126 | 346.4617766 | 893.0594212 | 1124.884058 | 1180.607101 | -1.598136793  | 34.32556174 | 33.503505   |
| <b>B7LHW1</b> | TY-2482_chromosome | - | 2655621 | 2657558 | 1625.252958 | 1637.793074 | 1523.199473 | 2737.042899 | 2999.301881 | 3288.615685 | -0.923511962  | 8.996999431 | 8.518382062 |
| <b>B7LHW3</b> | TY-2482_chromosome | + | 2657710 | 2658681 | 2266.287599 | 2520.666772 | 2524.184403 | 1164.308966 | 888.6391316 | 811.609262  | 1.328225877   | 26.31129765 | 25.58197275 |
| <b>D3GXL9</b> | TY-2482_chromosome | + | 2658867 | 2659254 | 176.6014466 | 134.806185  | 167.948809  | 251.3682212 | 259.0797941 | 240.0345977 | -0.58515829   | 4.186381573 | 3.861570718 |
| <b>Q53295</b> | TY-2482_chromosome | + | 2659501 | 2659686 | 3352.145943 | 2704.924542 | 2836.365894 | 2679.807983 | 3136.414976 | 2716.389013 | 0.092190389   | 0.12871158  | 0.103642285 |
| <b>B7LHW3</b> | TY-2482_chromosome | + | 2659662 | 2660129 | 6409.456309 | 5160.798376 | 5531.602325 | 4712.641817 | 4752.266274 | 4328.102582 | 0.344035472   | 0.529391089 | 0.442772652 |
| <b>B7LHW4</b> | TY-2482_chromosome | + | 2660143 | 2661489 | 17798.29929 | 14859.20101 | 15287.07109 | 9127.716179 | 9734.54308  | 8457.196753 | 0.834216455   | 1.759975828 | 1.561663117 |
| <b>B7LHW5</b> | TY-2482_chromosome | + | 2661601 | 2661840 | 121.2569274 | 123.0872552 | 85.65729828 | 198.5493358 | 225.573695  | 222.9794871 | -1.03143602   | 7.240132821 | 6.60714787  |
| <b>B7LHW2</b> | TY-2482_chromosome | + | 2661833 | 2663281 | 687.2625717 | 671.6260063 | 619.5647864 | 776.9049971 | 911.712765  | 765.6330603 | -0.324928267  | 2.301851373 | 2.068662083 |
| <b>B7LHW6</b> | TY-2482_chromosome | + | 2663296 | 2664174 | 1558.688288 | 1458.797795 | 1614.687352 | 716.7508375 | 732.4895189 | 781.5475087 | 1.08335079    | 25.37048851 | 24.65039445 |
| <b>B7LHW7</b> | TY-2482_chromosome | + | 2664506 | 2665468 | 5662.830462 | 4140.021007 | 4343.677381 | 11868.71682 | 15064.00895 | 15338.19127 | -1.527008226  | 5.428322217 | 5.048320975 |
| <b>B7LHW8</b> | TY-2482_chromosome | + | 2665497 | 2665790 | 1578.395937 | 1204.791734 | 1168.667383 | 2564.311235 | 3228.15214  | 3170.547857 | -1.1408652871 | 18.26423158 | 17.63265555 |
| <b>B7LHW9</b> | TY-2482_chromosome | + | 2665879 | 2666760 | 117.7522108 | 84.28321239 | 99.26971    | 228.0633982 | 302.5539633 | 267.4697853 | -1.342625049  | 13.9131305  | 13.34098733 |
| <b>B7LHX1</b> | TY-2482_chromosome | - | 2667032 | 2667691 | 11.09423252 | 10.50699311 | 7.490984425 | 13.90094049 | 25.90969363 | 24.36864433 | -1.173082793  | 2.019043086 | 1.803356279 |
| <b>B7LHX3</b> | TY-2482_chromosome | + | 2668090 | 2669244 | 34.98248821 | 21.88081928 | 27.46988552 | 26.41082239 | 34.34436394 | 33.35028272 | -0.084917851  | 0.204468687 | 0.166300332 |
| <b>B7LHX4</b> | TY-2482_chromosome | + | 2669259 | 2672360 | 475.2808104 | 332.1006239 | 436.5734414 | 307.7512319 | 285.442704  | 365.4678961 | 0.465525451   | 2.1545934   | 1.929903426 |
| <b>B7LHX7</b> | TY-2482_chromosome | + | 2673376 | 2674290 | 117.5046846 | 157.0744845 | 111.1735386 | 37.97734808 | 51.41561226 | 56.89852928 | 1.308315078   | 9.932938764 | 9.428623165 |
| <b>B7LHX8</b> | TY-2482_chromosome | + | 2674361 | 2675539 | 93.78802262 | 145.4767322 | 113.6076043 | 64.69419515 | 57.81354863 | 67.97687909 | 0.793024731   | 4.42547311  | 4.088548558 |
| <b>B7LHX5</b> | TY-2482_chromosome | + | 2675552 | 2676652 | 62.17507909 | 81.76914629 | 70.71227043 | 50.04738198 | 66.33690663 | 52.58822737 | 0.19154154    | 0.577051489 | 0.485265762 |
| <b>B7LHY0</b> | TY-2482_chromosome | + | 2676663 | 2677418 | 86.36411417 | 112.6765487 | 73.96628919 | 90.1781962  | 86.57894141 | 74.43157774 | 0.006346099   | 0.166538896 | 0.134314058 |
| <b>Q8CLX4</b> | TY-2482_chromosome | + | 2677629 | 2678106 | 24335.597   | 90852.83704 | 1149.460466 | 1786.669775 | 123.0152199 | 72.10779679 | 4.953463766   | 7.178220087 | 6.748523482 |
| <b>rffF</b>   | TY-2482_chromosome | - | 2677650 | 2677769 | 16452.61159 | 59932.35999 | 693.9981904 | 1135.861016 | 73.54863461 | 38.5691004  | 5.035938842   | 7.148580238 | 6.720285338 |
| <b>thrV</b>   | TY-2482_chromosome | - | 2677807 | 2677882 | 94.56111968 | 670.5875431 | 28.70489899 | 3.826193455 | 2.866927736 | 2.016160018 | 5.444682147   | 16.44955662 | 15.84012661 |
| <b>rffC</b>   | TY-2482_chromosome | - | 2677895 | 2678014 | 7823.870828 | 30431.3248  | 369.3043167 | 662.7192099 | 45.55316708 | 28.97157742 | 4.782053379   | 7.171254691 | 6.714792018 |
| <b>rriE</b>   | TY-2482_chromosome | - | 2678108 | 2681011 | 1259009.967 | 12875601.62 | 3533783.58  | 3245.132409 | 950.6038859 | 263.5835294 | 11.22779633   | 29.10743113 | 28.34717565 |
| <b>C1HUN0</b> | TY-2482_chromosome | + | 2678333 | 2678689 | 162944.951  | 1649482.521 | 450273.208  | 552.1442801 | 155.5014491 | 41.41475191 | 10.84013856   | 28.11079292 | 27.35946161 |
| <b>C1HUN1</b> | TY-2482_chromosome | + | 2678693 | 2679145 | 219571.8627 | 2447451.905 | 610396.9479 | 455.648159  | 122.2765397 | 32.71559099 | 11.62936589   | 29.28252259 | 28.52076175 |
| <b>C1HUN3</b> | TY-2482_chromosome | + | 2679222 | 2679425 | 103579.4266 | 1293156.948 | 325751.9229 | 150.1036273 | 59.81279877 | 11.97521598 | 12.16794809   | 32.55490679 | 31.75094828 |
| <b>Q1R3T8</b> | TY-2482_chromosome | + | 2680483 | 2680785 | 199596.3054 | 1638435.047 | 536562.8741 | 411.3829393 | 95.11905915 | 28.61125911 | 11.4812671    | 30.41251716 | 29.63540864 |
| <b>gltV</b>   | TY-2482_chromosome | - | 2681205 | 2681280 | 3613.317128 | 3519.00178  | 1941.335185 | 12007.08942 | 22718.30916 | 21484.23134 | -2.715417726  | 10.67266105 | 10.15249972 |
| <b>rrsD</b>   | TY-2482_chromosome | - | 2681366 | 2682907 | 1880848.578 | 8285785.902 | 4068677.054 | 2761.103719 | 574.2827396 | 159.0679351 | 11.55541621   | 31.5581081  | 30.76938955 |
| <b>Q57H85</b> | TY-2482_chromosome | - | 2681469 | 2681786 | 461373.1744 | 2045606.564 | 938774.8467 | 179.179641  | 131.0263215 | 48.7143633  | 12.80398417   | 56.44624289 | 55.47060224 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>E9WNY3</b> | TY-2482_chromosome | + | 2682761 | 2682994 | 273012.4006 | 1237298.4   | 533171.7063 | 1560.313899 | 417.2891389 | 263.1352506 | 9.365272382  | 32.88480664 | 32.07527303 |
| <b>C6UV66</b> | TY-2482_chromosome | + | 2683088 | 2683930 | 5692.940853 | 5667.739028 | 4308.232683 | 6772.275948 | 14182.37524 | 10552.88368 | -1.048941038 | 2.407926811 | 2.167382782 |
| <b>B7LHY2</b> | TY-2482_chromosome | - | 2683912 | 2684166 | 1128.847517 | 1432.502858 | 1261.529197 | 1159.91056  | 1212.08169  | 1113.358784 | 0.077932728  | 0.611409522 | 0.51584589  |
| <b>B7LHX9</b> | TY-2482_chromosome | - | 2684166 | 2684981 | 1594.368068 | 2346.921573 | 2114.649769 | 2506.356186 | 2290.381284 | 1881.499314 | -0.216765284 | 0.532221415 | 0.445245201 |
| <b>B7LHY4</b> | TY-2482_chromosome | - | 2684989 | 2685558 | 1562.896422 | 1880.75383  | 1910.51825  | 2585.686351 | 2462.293176 | 2263.207104 | -0.471229042 | 3.898989175 | 3.585435342 |
| <b>B7LHY5</b> | TY-2482_chromosome | - | 2685566 | 2686105 | 3256.126147 | 3555.015009 | 3697.888733 | 3173.098068 | 3126.441936 | 3110.248216 | 0.156786491  | 0.394028975 | 0.326385642 |
| <b>B7LHY6</b> | TY-2482_chromosome | - | 2686137 | 2686607 | 8364.549162 | 9110.29081  | 9414.665044 | 3528.126516 | 3409.449307 | 3680.513504 | 1.339292252  | 4.834538525 | 4.479081263 |
| <b>B7LHY7</b> | TY-2482_chromosome | - | 2686582 | 2687703 | 4222.644336 | 4375.715425 | 3997.265683 | 1713.822263 | 1672.398168 | 1719.089638 | 1.281398543  | 12.38239842 | 11.83580007 |
| <b>B7LHY3</b> | TY-2482_chromosome | + | 2687833 | 2688339 | 5898.215353 | 5529.976687 | 5804.372481 | 5284.034524 | 4948.121753 | 5263.635773 | 0.16986195   | 0.218077042 | 0.177622922 |
| <b>B7LHY8</b> | TY-2482_chromosome | + | 2688357 | 2689301 | 7035.919915 | 6745.210216 | 6686.682227 | 7117.030405 | 7270.290248 | 6876.043325 | -0.053218098 | 0.065664046 | 0.051785948 |
| <b>B7LHZ0</b> | TY-2482_chromosome | + | 2689350 | 2690636 | 2984.051673 | 2857.235365 | 2959.655333 | 3334.748756 | 3463.809326 | 3030.180622 | -0.151508545 | 0.409868278 | 0.340391187 |
| <b>B7LHY9</b> | TY-2482_chromosome | + | 2690661 | 2692034 | 2208.854994 | 2156.864541 | 2228.334179 | 1857.606927 | 1866.589037 | 1707.616291 | 0.285436353  | 1.985383467 | 1.771551098 |
| <b>B7LHZ2</b> | TY-2482_chromosome | + | 2692167 | 2692574 | 3117.809254 | 3387.308    | 3321.682735 | 1766.944987 | 1729.113275 | 1729.568487 | 0.897084343  | 7.554009615 | 7.109799492 |
| <b>B7LHZ3</b> | TY-2482_chromosome | - | 2692577 | 2692792 | 397.777522  | 377.4836644 | 342.363233  | 220.3033499 | 224.22572   | 207.3188231 | 0.763237574  | 8.236660715 | 7.707461415 |
| <b>B7LHZ4</b> | TY-2482_chromosome | - | 2692851 | 2693273 | 374.299164  | 410.0738489 | 412.2076195 | 263.4044567 | 245.4957039 | 269.9784499 | 0.61108798   | 5.810836678 | 5.418343253 |
| <b>B7LHZ1</b> | TY-2482_chromosome | - | 2693287 | 2693652 | 424.8858083 | 527.1761658 | 452.751438  | 266.7172745 | 283.8356667 | 271.9928324 | 0.716723444  | 8.334962362 | 7.869937795 |
| <b>B7LHZ6</b> | TY-2482_chromosome | - | 2693762 | 2694142 | 66272.48582 | 54314.41244 | 58259.56505 | 20132.5075  | 21428.23411 | 22105.97252 | 1.528413747  | 4.168010933 | 3.844118055 |
| <b>B7LHZ7</b> | TY-2482_chromosome | - | 2694186 | 2695172 | 247409.0836 | 218663.4291 | 239818.9432 | 87063.48905 | 90287.42429 | 92527.90409 | 1.42010591   | 3.491822852 | 3.195121121 |
| <b>B7LHZ8</b> | TY-2482_chromosome | - | 2695201 | 2695818 | 142025.5444 | 135597.7981 | 144937.2285 | 57439.49859 | 60301.98282 | 65752.3366  | 1.226059229  | 2.793910351 | 2.533069218 |
| <b>B7LHZ9</b> | TY-2482_chromosome | - | 2695855 | 2696241 | 86474.67004 | 82272.23593 | 89669.02733 | 38788.61812 | 40933.30518 | 43166.27003 | 1.097932701  | 2.357805551 | 2.120879408 |
| <b>B7LHZ5</b> | TY-2482_chromosome | - | 2696261 | 2696614 | 91175.3105  | 91625.6966  | 95388.71527 | 41801.48133 | 45250.64391 | 49325.93952 | 1.041387547  | 2.193957634 | 1.967268111 |
| <b>B7LI01</b> | TY-2482_chromosome | - | 2696912 | 2698240 | 278437.3539 | 275453.597  | 295219.1346 | 71127.00213 | 73318.06259 | 1.900143076 | 5.788014674  | 5.39573598  |             |
| <b>B7LI02</b> | TY-2482_chromosome | - | 2698251 | 2698682 | 142840.0362 | 139231.3    | 154275.807  | 27752.05054 | 27427.43071 | 31083.69877 | 2.365590291  | 8.53299253  | 8.064143802 |
| <b>A8AQJ7</b> | TY-2482_chromosome | + | 2698839 | 2699387 | 138482.4075 | 134286.6648 | 145167.0365 | 25879.75296 | 27249.04339 | 28044.41839 | 2.385222246  | 8.758036068 | 8.283516945 |
| <b>Q1R625</b> | TY-2482_chromosome | + | 2699441 | 2700061 | 148221.5681 | 144209.1978 | 162077.2035 | 31765.22121 | 34037.00323 | 30784.56121 | 2.258345941  | 7.897732113 | 7.445709849 |
| <b>B7L4J6</b> | TY-2482_chromosome | - | 2700725 | 2701027 | 83362.25412 | 80860.95411 | 88680.49886 | 29588.20284 | 32240.86099 | 27197.46771 | 1.523839123  | 4.139668355 | 3.817240215 |
| <b>B7L4J7</b> | TY-2482_chromosome | - | 2701045 | 2701581 | 146921.1118 | 141253.0768 | 151287.5561 | 56214.65709 | 60789.12054 | 58026.58623 | 1.346309544  | 3.295168431 | 3.008176768 |
| <b>Q1R618</b> | TY-2482_chromosome | + | 2701792 | 2702343 | 137755.8854 | 132948.1043 | 145339.4124 | 60926.51186 | 71182.67008 | 78210.5687  | 1.013446081  | 2.002851262 | 1.787878638 |
| <b>B7L4K0</b> | TY-2482_chromosome | - | 2702460 | 2702711 | 71089.0964  | 69187.49983 | 69516.25885 | 24424.664   | 24957.53404 | 30008.13646 | 1.413659351  | 3.696913057 | 3.39239095  |
| <b>B7L4K2</b> | TY-2482_chromosome | - | 2702905 | 2703312 | 126484      | 118821.1966 | 129380.2772 | 41981.13715 | 40552.88994 | 52466.29267 | 1.504673743  | 3.889114608 | 3.576088714 |
| <b>B7L4K3</b> | TY-2482_chromosome | - | 2703328 | 2704026 | 177747.2609 | 168685.6723 | 180338.2712 | 57132.34318 | 55052.20078 | 67727.74103 | 1.575210472  | 4.208360882 | 3.881892764 |
| <b>A8AQL1</b> | TY-2482_chromosome | + | 2704026 | 2704430 | 98234.20829 | 95971.76999 | 107232.9149 | 28166.10315 | 26989.45516 | 34199.09834 | 1.785958964  | 5.265305534 | 4.892135941 |
| <b>A7MPI1</b> | TY-2482_chromosome | + | 2704539 | 2705576 | 193416.0386 | 204243.4905 | 215523.6491 | 56190.6519  | 56172.80473 | 64237.78411 | 1.805461914  | 5.391393577 | 5.013234548 |
| <b>B7L4K8</b> | TY-2482_chromosome | + | 2705827 | 2706429 | 102078.4819 | 111895.4534 | 114905.1555 | 34178.90552 | 34904.40018 | 41686.17724 | 1.572477843  | 4.364522136 | 4.030798555 |
| <b>Q1R603</b> | TY-2482_chromosome | + | 2706359 | 2707057 | 117182.827  | 129050.5844 | 134140.0475 | 40792.07793 | 41765.96934 | 47779.15027 | 1.548032078  | 4.240645839 | 3.913439125 |
| <b>B7L4L0</b> | TY-2482_chromosome | - | 2707105 | 2707413 | 53508.62817 | 59242.91014 | 65287.40011 | 20827.27664 | 20405.9927  | 24020.65822 | 1.462151552  | 3.952386576 | 3.636489303 |
| <b>B7L4L2</b> | TY-2482_chromosome | + | 2707792 | 2708256 | 532.165989  | 477.1359337 | 394.4494311 | 228.7171117 | 287.3761439 | 248.8793809 | 0.856526768  | 9.255140762 | 8.768520586 |
| <b>B7L4L3</b> | TY-2482_chromosome | - | 2708259 | 2708732 | 2491.416816 | 2367.686429 | 2340.597215 | 760.1828159 | 900.0774837 | 727.7495584 | 1.593107729  | 44.24733193 | 43.34977443 |
| <b>B7L4L4</b> | TY-2482_chromosome | - | 2708808 | 2708999 | 252.0836015 | 288.8503572 | 231.7897858 | 75.93998735 | 83.76710298 | 96.38999702 | 1.653790864  | 20.41794206 | 19.76342261 |
| <b>C6UVB2</b> | TY-2482_chromosome | - | 2709185 | 2710366 | 264199.0984 | 245361.5893 | 267849.4738 | 156255.3238 | 141030.3779 | 154670.3818 | 0.807503036  | 1.390654202 | 1.221681623 |
| <b>B7L4L1</b> | TY-2482_chromosome | - | 2710440 | 2712551 | 339956.424  | 330290.9326 | 353909.5974 | 139563.6182 | 138554.949  | 147967.3049 | 1.283916067  | 2.984362982 | 2.713574514 |
| <b>C4ZUJ6</b> | TY-2482_chromosome | - | 2712582 | 2713118 | 72194.6593  | 71733.12152 | 78851.77493 | 27705.6652  | 29626.62336 | 30042.90849 | 1.371929249  | 3.476228897 | 3.18090315  |
| <b>A7MKJ1</b> | TY-2482_chromosome | + | 2713131 | 2713589 | 65865.56063 | 67797.88709 | 69010.38629 | 26103.33101 | 29781.66332 | 29503.83302 | 1.250881392  | 3.06475284  | 2.790401625 |
| <b>B7L4L8</b> | TY-2482_chromosome | - | 2713718 | 2714002 | 632.2986883 | 654.0952212 | 609.382952  | 717.7974459 | 696.3005548 | 739.9827088 | -0.200586771 | 1.089452944 | 0.945788653 |
| <b>B7L4L9</b> | TY-2482_chromosome | - | 2714013 | 2714369 | 733.0523742 | 686.698029  | 768.4207684 | 1058.8118   | 1015.351547 | 996.9797478 | -0.463110213 | 5.442087422 | 5.061458388 |
| <b>B7L4M1</b> | TY-2482_chromosome | - | 2714372 | 2714755 | 1042.369387 | 1201.827347 | 1106.361083 | 1533.197229 | 1320.418791 | 1399.898988 | -0.379741425 | 3.074094144 | 2.798901525 |
| <b>B7L4M2</b> | TY-2482_chromosome | - | 2714758 | 2715477 | 2184.438541 | 1971.622844 | 2330.010555 | 2659.27196  | 2337.693386 | 2365.633317 | -0.144281494 | 0.651287015 | 0.536951282 |
| <b>B7L4M3</b> | TY-2482_chromosome | - | 2715647 | 2716456 | 10674.35936 | 12375.01232 | 12314.01655 | 14175.08001 | 14436.86392 | 15881.78645 | -0.344766144 | 0.480489584 | 0.400158442 |
| <b>B7L4M4</b> | TY-2482_chromosome | + | 2716677 | 2716892 | 476.179839  | 492.4257925 | 442.8292462 | 435.1644924 | 493.6939004 | 583.8016534 | -0.114046456 | 0.376236853 | 0.311026549 |
| <b>B7L4M0</b> | TY-2482_chromosome | - | 2716947 | 2717534 | 16921.76103 | 17416.9983  | 18438.77938 | 12973.76753 | 13033.75229 | 13783.61391 | 0.417634866  | 0.627854611 | 0.52979034  |
| <b>B7L4M6</b> | TY-2482_chromosome | - | 2717632 | 2717829 | 569.2238814 | 574.2977589 | 639.0034626 | 651.7264628 | 632.2568184 | 625.9708713 | -0.081740239 | 0.405714325 | 0.336951282 |
| <b>B7L4M7</b> | TY-2482_chromosome | - | 2717842 | 2719644 | 974.4956823 | 1159.082307 | 1194.994826 | 919.7073869 | 862.6722768 | 976.8224536 | 0.260408767  | 1.842701262 | 1.639415659 |
| <b>B7L4M8</b> | TY-2482_chromosome | - | 2719647 | 2720198 | 489.9192568 | 590.048289  | 541.661207  | 339.2935209 | 293.2687433 | 306.9094001 | 0.746087859  | 9.301784057 | 8.81356033  |
| <b>B7L4M9</b> | TY-2482_chromosome | + | 2720326 | 2722236 | 2299.542105 | 2075.325068 | 2196.783943 | 3271.85789  | 3157.957387 | 3013.349992 | -0.503814548 | 2.824220234 | 2.561949193 |
| <b>B7L4M5</b> | TY-2482_chromosome | + | 2722239 | 2723258 | 1202.763688 | 1184.198094 | 1201.121306 | 919.2850682 | 907.4169046 | 792.1603996 | 0.453277097  | 4.985651214 | 4.623836371 |



|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L4N1</b> | TY-2482_chromosome | + | 2723255 | 2723470 | 651.6038224 | 669.6526054 | 580.882644  | 309.7437132 | 349.1817939 | 370.5949049 | 0.860937249  | 12.4812127  | 11.93400138 |
| <b>B7L4N2</b> | TY-2482_chromosome | + | 2723527 | 2724393 | 1878.252711 | 1668.52747  | 1608.064411 | 1432.099025 | 1365.08083  | 1474.789467 | 0.279402416  | 1.873739926 | 1.668225739 |
| <b>B7L4N3</b> | TY-2482_chromosome | - | 2724454 | 2724855 | 1847.259087 | 2191.963447 | 2213.712242 | 1527.71444  | 1239.867882 | 1217.606014 | 0.625593928  | 7.236024742 | 6.803511082 |
| <b>B7L4N4</b> | TY-2482_chromosome | + | 2724935 | 2725147 | 3607.179207 | 3976.515319 | 4022.672802 | 4264.215207 | 3618.89058  | 3291.883271 | 0.037386928  | 0.107356977 | 0.085154374 |
| <b>B7L4N0</b> | TY-2482_chromosome | + | 2725157 | 2725786 | 12437.26022 | 11786.78833 | 13582.47405 | 14764.16766 | 12123.70481 | 12060.61543 | -0.016521056 | 0.045987951 | 0.036222182 |
| <b>B7L4N6</b> | TY-2482_chromosome | + | 2725828 | 2727927 | 3316.961161 | 3150.165325 | 2964.303304 | 4381.358377 | 3524.851626 | 3811.310553 | -0.322550556 | 0.970093234 | 0.836247985 |
| <b>B7L4N7</b> | TY-2482_chromosome | - | 2728000 | 2729217 | 579.388763  | 455.9133025 | 504.4269494 | 577.3472322 | 644.0064233 | 509.3449244 | -0.129894568 | 0.68047048  | 0.576809412 |
| <b>B7L4N8</b> | TY-2482_chromosome | - | 2729306 | 2729866 | 486.4807151 | 593.2102592 | 485.9719507 | 163.2676186 | 194.6931899 | 154.5640948 | 1.544564073  | 29.52021736 | 28.75543007 |
| <b>B7L4N5</b> | TY-2482_chromosome | - | 2729901 | 2730500 | 1608.124575 | 1766.666723 | 1893.239452 | 456.8411526 | 425.3393148 | 412.6495553 | 2.024387718  | 81.05950149 | 79.90900161 |
| <b>B7L4P1</b> | TY-2482_chromosome | - | 2730765 | 2731334 | 1813.780032 | 1605.353503 | 1907.631548 | 2390.391088 | 2289.718904 | 2232.61438  | -0.333177834 | 3.0130264   | 2.741100397 |
| <b>B7L4N9</b> | TY-2482_chromosome | + | 2731605 | 2732783 | 287.8339698 | 327.873875  | 264.8318459 | 1307.992176 | 1875.90854  | 1916.435644 | -2.578813186 | 69.18017625 | 68.10307796 |
| <b>B7L4P3</b> | TY-2482_chromosome | + | 2733048 | 2735588 | 105416.8467 | 112290.7769 | 117698.1347 | 113727.5093 | 95217.31619 | 99124.78414 | 0.120737067  | 0.127702218 | 0.102725081 |
| <b>B7L4P4</b> | TY-2482_chromosome | + | 2735588 | 2735911 | 9645.195514 | 9912.432279 | 10898.68461 | 17928.11572 | 16855.92605 | 17075.94027 | -0.753764302 | 1.605436561 | 1.41824283  |
| <b>B7L4P5</b> | TY-2482_chromosome | + | 2736041 | 2736844 | 4129.204714 | 4891.570884 | 4867.408226 | 15264.21994 | 16365.53252 | 14947.89039 | -1.766889637 | 6.612072591 | 6.198003082 |
| <b>B7L4P2</b> | TY-2482_chromosome | + | 2736866 | 2738236 | 2667.973657 | 3239.7574   | 3002.74319  | 14386.02494 | 15315.68386 | 13799.16437 | -2.327072409 | 10.81512762 | 10.29149423 |
| <b>B7L4P8</b> | TY-2482_chromosome | + | 2738948 | 2740282 | 31.08710022 | 39.53404316 | 29.05442458 | 24.62086609 | 39.7824586  | 28.66910871 | 0.023148203  | 0.088798015 | 0.070262709 |
| <b>B7L4P9</b> | TY-2482_chromosome | + | 2740306 | 2741325 | 119.6785272 | 77.06922457 | 120.2421302 | 116.8467377 | 96.36891208 | 80.52487421 | 0.207651246  | 0.264364048 | 0.21765821  |
| <b>B7L4Q0</b> | TY-2482_chromosome | + | 2741378 | 2742205 | 86.5392145  | 98.07097034 | 93.36844491 | 73.21881228 | 62.2000352  | 61.32890638 | 0.469409948  | 1.817877963 | 1.616117905 |
| <b>B7L4P6</b> | TY-2482_chromosome | + | 2742205 | 2742987 | 94.62488386 | 120.3162982 | 89.53089338 | 96.39150699 | 100.3505666 | 98.47936547 | -0.037585515 | 0.040267771 | 0.031745891 |
| <b>B5YTT2</b> | TY-2482_chromosome | + | 2743024 | 2743818 | 550.0595444 | 387.5900257 | 506.9671912 | 391.9249546 | 400.9843174 | 431.2249529 | 0.323857413  | 1.231690795 | 1.076614804 |
| <b>B7L4Q3</b> | TY-2482_chromosome | - | 2743976 | 2745058 | 118.8054999 | 122.2100176 | 122.1140665 | 126.972715  | 136.0558869 | 109.8147861 | -0.047732675 | 0.082905308 | 0.065871698 |
| <b>B7L4Q4</b> | TY-2482_chromosome | - | 2745073 | 2746374 | 76.69311356 | 101.8330052 | 68.1409208  | 66.58699665 | 68.52532997 | 60.19920735 | 0.096064164  | 0.361417331 | 0.298680643 |
| <b>B7L4Q5</b> | TY-2482_chromosome | - | 2746389 | 2746739 | 9.164629167 | 19.17796477 | 19.62752833 | 26.201046   | 21.70675987 | 18.26715512 | -0.525999281 | 0.616791304 | 0.520359517 |
| <b>B7L4Q1</b> | TY-2482_chromosome | - | 2746753 | 2747628 | 50.45553611 | 57.53872316 | 46.29980999 | 43.98317183 | 35.58506833 | 39.03041737 | 0.323133281  | 0.809516008 | 0.691938371 |
| <b>B7L4Q7</b> | TY-2482_chromosome | - | 2747628 | 2748851 | 51.93451681 | 43.28666774 | 54.37296175 | 34.97379    | 28.93489306 | 43.19480661 | 0.537894403  | 1.273289049 | 1.115093561 |
| <b>B7L4Q9</b> | TY-2482_chromosome | - | 2750101 | 2750460 | 63.64533536 | 81.55293419 | 57.95942267 | 57.4976372  | 39.57598892 | 40.902875   | 0.459601687  | 1.560519325 | 1.377853697 |
| <b>B7L4Q6</b> | TY-2482_chromosome | - | 2750480 | 2751382 | 151.9821763 | 194.9576397 | 176.6650639 | 185.9198316 | 117.4849877 | 104.1316226 | 0.297227941  | 1.116618827 | 0.97064736  |
| <b>B7L4R1</b> | TY-2482_chromosome | - | 2751654 | 2752655 | 5718.556515 | 6442.349732 | 6397.616846 | 2095.999179 | 1787.408551 | 1542.705927 | 1.748974787  | 17.69456748 | 17.0678067  |
| <b>B7L4R0</b> | TY-2482_chromosome | - | 2752651 | 2753406 | 3250.964074 | 3328.478876 | 3486.7767   | 1588.476278 | 1607.529679 | 1318.180572 | 1.156605439  | 11.08082391 | 10.55281104 |
| <b>B7L4R3</b> | TY-2482_chromosome | - | 2753402 | 2754076 | 3044.572544 | 3281.432888 | 3139.316729 | 1761.56319  | 1897.866252 | 1694.766131 | 0.802764299  | 6.201826997 | 5.798679506 |
| <b>B7L4R4</b> | TY-2482_chromosome | - | 2754097 | 2754930 | 2681.685054 | 2633.319952 | 2540.328486 | 1867.585963 | 2060.304471 | 1846.753928 | 0.483143047  | 3.783722217 | 3.476029916 |
| <b>B7L4R2</b> | TY-2482_chromosome | - | 2755040 | 2756323 | 8100.269387 | 7136.812481 | 7596.040009 | 6656.598766 | 6459.241784 | 5625.205761 | 0.304793109  | 0.440617078 | 0.367226854 |
| <b>B7L4R5</b> | TY-2482_chromosome | - | 2756418 | 2757503 | 5472.486193 | 5053.700039 | 5693.521205 | 7265.886278 | 7408.766926 | 6977.306056 | -0.387156738 | 0.761604732 | 0.649129164 |
| <b>C3SQ92</b> | TY-2482_chromosome | - | 2757563 | 2758282 | 4271.107664 | 3897.147368 | 4084.660822 | 6320.535604 | 7041.775228 | 6750.133729 | -0.694144639 | 1.787922546 | 1.588509659 |
| <b>B7L4R8</b> | TY-2482_chromosome | - | 2758485 | 2759720 | 117.4200926 | 118.8487674 | 136.1175369 | 109.676518  | 102.365371  | 117.2657888 | 0.201688405  | 0.513079351 | 0.428329477 |
| <b>D3QTK9</b> | TY-2482_chromosome | - | 2759635 | 2760015 | 18.89845377 | 30.50609571 | 31.16010765 | 35.37401917 | 30.21399532 | 33.62626205 | -0.340894252 | 0.478173662 | 0.398261016 |
| <b>D3QTK9</b> | TY-2482_chromosome | - | 2760029 | 2760466 | 24.7532953  | 30.87050946 | 27.31755093 | 26.78612324 | 40.08446478 | 29.06686417 | -0.254353001 | 0.299781853 | 0.247322395 |
| <b>B7L4S1</b> | TY-2482_chromosome | - | 2760453 | 2760989 | 45.22335273 | 40.39580467 | 40.39328894 | 38.4675387  | 26.92190327 | 45.11273576 | 0.203558764  | 0.303860002 | 0.250874741 |
| <b>B7L4S2</b> | TY-2482_chromosome | - | 2760992 | 2761768 | 131.2125464 | 126.5624885 | 108.2488608 | 109.0690532 | 110.6005819 | 119.5068997 | 0.088724989  | 0.239035072 | 0.195706722 |
| <b>B7L4S0</b> | TY-2482_chromosome | + | 2761888 | 2764437 | 1644.070602 | 1354.732818 | 1438.347677 | 2157.602998 | 2430.47496  | 2157.973989 | -0.572599787 | 6.655966156 | 6.240766554 |
| <b>B7L4S4</b> | TY-2482_chromosome | - | 2764611 | 2765168 | 1474.715846 | 1723.211926 | 1543.200434 | 1788.184697 | 1815.926998 | 1920.948896 | -0.258435015 | 1.362544014 | 1.196003746 |
| <b>B7L4S5</b> | TY-2482_chromosome | + | 2765488 | 2767620 | 1701.636718 | 1715.490865 | 1589.301267 | 2589.771225 | 2607.585164 | 2428.652076 | -0.625082694 | 7.363216452 | 6.926204744 |
| <b>D3GZL7</b> | TY-2482_chromosome | + | 2767643 | 2768353 | 1354.861388 | 1148.386797 | 1196.986431 | 1042.003945 | 1157.777319 | 1020.313588 | 0.225109714  | 1.290673574 | 1.13134956  |
| <b>B7L4S3</b> | TY-2482_chromosome | + | 2768367 | 2768765 | 1071.992239 | 866.8209158 | 964.1083515 | 582.0395236 | 636.6190202 | 550.6242005 | 0.754026547  | 10.18948694 | 9.679015001 |
| <b>B5YTV0</b> | TY-2482_chromosome | + | 2768787 | 2769668 | 2037.385935 | 1579.64461  | 1870.54827  | 902.0145229 | 978.4989703 | 879.0082091 | 1.047841698  | 18.99077925 | 18.3509307  |
| <b>B7L4S9</b> | TY-2482_chromosome | - | 2769809 | 2771530 | 692.2753993 | 589.9992801 | 740.9005983 | 727.3328526 | 702.9523236 | 765.4004309 | -0.057994758 | 0.458945722 | 0.382781506 |
| <b>B7L4T1</b> | TY-2482_chromosome | + | 2771909 | 2773528 | 20997.44419 | 19584.08178 | 19311.29695 | 25061.2919  | 23848.95363 | 22045.88045 | -0.243518444 | 0.310424522 | 0.256391531 |
| <b>B7L4T2</b> | TY-2482_chromosome | + | 2773648 | 2773962 | 383.6035653 | 383.5284384 | 379.3668286 | 270.4902067 | 325.5284724 | 327.2129052 | 0.3154692    | 1.790287542 | 1.590461368 |
| <b>B7L4T3</b> | TY-2482_chromosome | + | 2774024 | 2774317 | 725.9440424 | 713.515215  | 566.8449468 | 436.9396326 | 455.1561018 | 488.3425374 | 0.502953241  | 4.849215251 | 4.49257301  |
| <b>B7L4T4</b> | TY-2482_chromosome | - | 2774353 | 2775702 | 3006.511179 | 2686.588197 | 2841.89586  | 3751.450806 | 3594.266011 | 3536.917407 | -0.329468705 | 1.237839779 | 1.082515051 |
| <b>B7L4S7</b> | TY-2482_chromosome | - | 2775702 | 2776418 | 4739.581054 | 4431.695995 | 5110.101248 | 6445.983145 | 4118.531415 | 4176.806538 | 0.173139916  | 0.204942852 | 0.166679497 |
| <b>Q1R5M9</b> | TY-2482_chromosome | - | 2776511 | 2776693 | 416.4923615 | 484.1193739 | 419.7724354 | 253.6833684 | 302.3188244 | 317.7140604 | 0.556884098  | 4.985007394 | 4.623592638 |
| <b>B7L4T6</b> | TY-2482_chromosome | + | 2776646 | 2777119 | 796.0550514 | 693.2548031 | 767.1564657 | 534.5780942 | 571.4338126 | 615.0198138 | 0.428833503  | 3.488115074 | 3.191929848 |
| <b>B7L4T7</b> | TY-2482_chromosome | + | 2777219 | 2779537 | 2226.574116 | 2096.533986 | 2183.832022 | 2399.035737 | 2282.780161 | 2019.512477 | -0.034052299 | 0.145820229 | 0.117420155 |
| <b>B7L4T5</b> | TY-2482_chromosome | + | 2779978 | 2780202 | 6325.884641 | 6432.619491 | 6232.651941 | 982.6668372 | 881.0367521 | 817.0629534 | 2.810326941  | 42.65115005 | 41.76645646 |

|                |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L4T8</b>  | TY-2482_chromosome | + | 2780222 | 2782588 | 25101.89659 | 24834.00076 | 26151.23689 | 6459.668487 | 6410.111208 | 5822.461829 | 2.03260505   | 7.858886775 | 7.408094459 |
| <b>B7L4U0</b>  | TY-2482_chromosome | + | 2782591 | 2782824 | 1692.156264 | 1744.068003 | 1728.401513 | 924.0008654 | 885.6901367 | 713.5406588 | 1.019175326  | 21.08454597 | 20.42009709 |
| <b>D8BVVW7</b> | TY-2482_chromosome | - | 2782833 | 2783057 | 107.5883365 | 144.525376  | 92.70654636 | 73.96493046 | 79.44892608 | 60.92598741 | 0.560950137  | 2.700510602 | 2.443774064 |
| <b>B7L4U1</b>  | TY-2482_chromosome | + | 2783030 | 2783905 | 273.1270978 | 277.5478879 | 271.6168537 | 237.1551575 | 220.0210404 | 278.387969  | 0.160694209  | 0.580659316 | 0.488335897 |
| <b>B7L4T9</b>  | TY-2482_chromosome | - | 2783940 | 2784707 | 985.5700098 | 1104.188311 | 1119.0094   | 777.938143  | 766.3696091 | 828.4843696 | 0.427704069  | 4.525246791 | 4.183953615 |
| <b>B5YTW4</b>  | TY-2482_chromosome | + | 2784682 | 2785425 | 983.3990684 | 930.9711507 | 1039.945718 | 801.8320608 | 738.5628744 | 786.8391515 | 0.370562646  | 3.153301621 | 2.873659731 |
| <b>B7L4U4</b>  | TY-2482_chromosome | + | 2785487 | 2786059 | 2159.859616 | 2143.233037 | 1950.006603 | 1399.291362 | 1365.948349 | 1235.160286 | 0.622995004  | 8.258303679 | 7.79555755  |
| <b>B7L4U2</b>  | TY-2482_chromosome | + | 2786423 | 2787736 | 877.8675841 | 994.4624473 | 815.1033119 | 1572.40139  | 1735.634429 | 1487.013863 | -0.891697491 | 13.87236046 | 13.30086646 |
| <b>B7L4U5</b>  | TY-2482_chromosome | - | 2787787 | 2789868 | 10092.31528 | 11303.32341 | 11184.82442 | 14643.77845 | 14909.13556 | 12490.83856 | -0.388603721 | 0.555981821 | 0.466340233 |
| <b>B7L4U7</b>  | TY-2482_chromosome | - | 2789881 | 2792271 | 27331.93276 | 28254.2357  | 28037.79604 | 28150.48328 | 25354.41154 | 23048.87442 | 0.115407792  | 0.14171535  | 0.114428377 |
| <b>B7L4U8</b>  | TY-2482_chromosome | + | 2792883 | 2795585 | 23201.70281 | 23459.40193 | 22087.07747 | 21594.54349 | 16650.22755 | 17260.66542 | 0.288754326  | 0.414659375 | 0.34467153  |
| <b>B7L4U9</b>  | TY-2482_chromosome | - | 2795634 | 2796647 | 822.0426822 | 741.5095464 | 763.0244873 | 1117.975589 | 1003.264957 | 1075.005905 | -0.442340015 | 4.828854156 | 4.474185088 |
| <b>B7L4U6</b>  | TY-2482_chromosome | - | 2796654 | 2797877 | 135.035928  | 134.4448182 | 140.7106069 | 112.7416661 | 118.8873921 | 114.0736464 | 0.253866761  | 0.828937238 | 0.709187267 |
| <b>B7L4V1</b>  | TY-2482_chromosome | + | 2798066 | 2799661 | 292.9462207 | 193.1173666 | 247.147745  | 444.0155429 | 456.1985123 | 441.8463854 | -0.789724755 | 8.329100623 | 7.864329806 |
| <b>B7L4V2</b>  | TY-2482_chromosome | - | 2799649 | 2800404 | 716.9663459 | 676.3502962 | 796.961247  | 974.2169141 | 971.5979992 | 1043.945482 | -0.40945152  | 4.444634073 | 4.106763551 |
| <b>B7L4V0</b>  | TY-2482_chromosome | - | 2800424 | 2801251 | 863.0312154 | 855.8050122 | 843.4591281 | 1271.514667 | 1468.15799  | 1670.188501 | -0.776002542 | 11.64102091 | 11.10531074 |
| <b>B7L4V4</b>  | TY-2482_chromosome | - | 2801299 | 2801622 | 211.0983598 | 219.1861568 | 182.9577865 | 298.9454163 | 368.5825122 | 403.6013994 | -0.83270037  | 6.94884413  | 6.527031358 |
| <b>B7L4V5</b>  | TY-2482_chromosome | + | 2801812 | 2803314 | 768.5849799 | 703.0554036 | 754.2405986 | 6652.024695 | 5364.675271 | 14593.52855 | -3.522264661 | 19.82038363 | 19.17171466 |
| <b>B7L4V6</b>  | TY-2482_chromosome | - | 2803372 | 2803974 | 37.4923565  | 51.78524651 | 29.42965669 | 86.44984374 | 81.8765535  | 454.9094525 | -2.450001351 | 6.474706024 | 6.064680673 |
| <b>B7L4V3</b>  | TY-2482_chromosome | - | 2803980 | 2804744 | 32.53761888 | 39.55209297 | 27.73175773 | 73.32355449 | 85.38011482 | 185.9284295 | -1.829456208 | 7.441856771 | 7.002937122 |
| <b>B7L4V8</b>  | TY-2482_chromosome | - | 2804750 | 2805457 | 40.41705119 | 51.82693163 | 26.75100116 | 80.70140505 | 87.43119004 | 104.8191714 | -1.31999931  | 5.741413459 | 5.350206833 |
| <b>B7L4V9</b>  | TY-2482_chromosome | - | 2805476 | 2806990 | 38.96146107 | 42.16656532 | 34.78011626 | 94.03677495 | 116.9462295 | 120.6177244 | -1.549548175 | 9.983144176 | 9.478091912 |
| <b>B7L4V7</b>  | TY-2482_chromosome | - | 2807109 | 2809553 | 4196.734935 | 4244.452812 | 4238.37587  | 4854.49976  | 4800.995796 | 4174.11048  | -0.13224419  | 0.17777644  | 0.143673569 |
| <b>B7L4W1</b>  | TY-2482_chromosome | - | 2809575 | 2811005 | 3595.04337  | 3297.397008 | 3522.823625 | 3969.210881 | 4179.355467 | 3536.495963 | -0.14838949  | 0.410719939 | 0.341038618 |
| <b>B7L4W0</b>  | TY-2482_chromosome | - | 2811008 | 2812300 | 2649.160028 | 2365.787797 | 2722.353224 | 3628.630897 | 3573.973111 | 3211.572956 | -0.39457384  | 1.660948981 | 1.46931471  |
| <b>B7L4W3</b>  | TY-2482_chromosome | - | 2812321 | 2814291 | 3286.051564 | 3056.639861 | 2967.109919 | 3640.765216 | 3638.436422 | 2949.705314 | -0.140470428 | 0.313293128 | 0.258964464 |
| <b>B7L4W4</b>  | TY-2482_chromosome | - | 2814291 | 2816474 | 4813.957187 | 4545.264736 | 4428.227158 | 6529.972717 | 6400.44325  | 5777.75474  | -0.442905933 | 0.857670589 | 0.734583857 |
| <b>B7L4W2</b>  | TY-2482_chromosome | - | 2816750 | 2817850 | 5568.439401 | 5335.559633 | 5729.542755 | 5642.635041 | 4860.4404   | 4678.347988 | 0.14395582   | 0.182117503 | 0.147261138 |
| <b>B7L4W6</b>  | TY-2482_chromosome | + | 2818043 | 2818633 | 228.6956737 | 132.0829725 | 261.8265164 | 379.7071125 | 420.9796055 | 432.5779785 | -0.825346565 | 7.385508362 | 6.947782158 |
| <b>B7L4W7</b>  | TY-2482_chromosome | - | 2818696 | 2820033 | 350.0304766 | 300.7117986 | 257.902541  | 444.1380278 | 493.3784219 | 462.1205679 | -0.631126211 | 5.35086474  | 4.973566841 |
| <b>Q8FCR0</b>  | TY-2482_chromosome | + | 2820091 | 2822070 | 341.1128946 | 284.3731256 | 355.9405429 | 329.2619549 | 343.1808575 | 358.8618514 | -0.01050251  | 0.169425752 | 0.136863319 |
| <b>B7L4W9</b>  | TY-2482_chromosome | - | 2820706 | 2821698 | 2944.92124  | 2648.466261 | 2952.329465 | 2640.418839 | 2535.89905  | 2629.730449 | 0.162562887  | 0.370068858 | 0.305868307 |
| <b>B7L4X0</b>  | TY-2482_chromosome | - | 2821925 | 2822617 | 1678.800343 | 1606.58853  | 1599.208609 | 1592.404111 | 1458.656275 | 1511.8141   | 0.100908774  | 0.44894596  | 0.374747115 |
| <b>B7L4X1</b>  | TY-2482_chromosome | - | 2822743 | 2823777 | 4939.005052 | 4403.11475  | 4619.163496 | 4407.992931 | 4072.922864 | 4068.644337 | 0.173105349  | 0.226688276 | 0.185373882 |
| <b>B7L4X2</b>  | TY-2482_chromosome | + | 2824109 | 2824594 | 319.5808701 | 392.2566761 | 407.6012231 | 327.9741641 | 315.2687797 | 337.1478427 | 0.178091416  | 0.785652486 | 0.670803409 |
| <b>B7L4X7</b>  | TY-2482_chromosome | - | 2827278 | 2829017 | 1425.764475 | 1456.867401 | 1570.083918 | 296.0615539 | 351.5580138 | 291.8913807 | 2.254858876  | 92.34196264 | 91.13784265 |
| <b>B7L4X3</b>  | TY-2482_chromosome | + | 2829137 | 2829574 | 1379.740368 | 1424.703835 | 1214.539937 | 313.6292601 | 316.0100726 | 305.0623773 | 2.068583031  | 82.04988664 | 80.88943116 |
| <b>B7L5Q2</b>  | TY-2482_chromosome | - | 2829567 | 2830307 | 916.753892  | 911.8131404 | 925.2501773 | 520.9984387 | 495.4741578 | 478.043861  | 0.881969647  | 16.71582185 | 16.10355098 |
| <b>B7L5Q3</b>  | TY-2482_chromosome | - | 2830307 | 2831374 | 487.3378368 | 446.8817662 | 464.1258704 | 262.3241983 | 270.5984101 | 229.5783535 | 0.886036365  | 11.49050098 | 10.95657926 |
| <b>B7L5Q4</b>  | TY-2482_chromosome | - | 2831379 | 2832221 | 66.84240484 | 60.00342899 | 77.15361273 | 40.98426484 | 45.27210368 | 38.29369294 | 0.757135933  | 2.778222884 | 2.518174115 |
| <b>B7L5Q5</b>  | TY-2482_chromosome | - | 2832221 | 2833105 | 28.01624689 | 35.62106438 | 30.24521874 | 21.3908782  | 22.25210357 | 30.24755656 | 0.299968432  | 0.493354969 | 0.411345798 |
| <b>B7L5Q6</b>  | TY-2482_chromosome | - | 2833206 | 2834519 | 121.898706  | 130.559776  | 112.3957508 | 72.16082504 | 78.91794583 | 65.80445927 | 0.710542929  | 4.049926832 | 3.729140639 |
| <b>B7L5Q7</b>  | TY-2482_chromosome | - | 2834918 | 2835628 | 96.2916978  | 109.0642431 | 103.4367318 | 51.18856414 | 64.3439231  | 45.28780224 | 0.911205117  | 5.240391015 | 4.868247395 |
| <b>B7L5Q8</b>  | TY-2482_chromosome | - | 2835633 | 2836397 | 84.24889744 | 127.311649  | 120.2939073 | 59.14410534 | 59.72105667 | 53.98099479 | 0.883179159  | 4.959048401 | 4.598233085 |
| <b>B7L5Q9</b>  | TY-2482_chromosome | - | 2836397 | 2837671 | 109.4835228 | 138.6941578 | 116.5414719 | 102.1302244 | 107.2753963 | 95.38878694 | 0.196379821  | 0.721497321 | 0.613618692 |
| <b>B7L5Q1</b>  | TY-2482_chromosome | - | 2837671 | 2838594 | 60.06876264 | 60.5669681  | 56.21769093 | 34.09410881 | 29.63844023 | 18.63005569 | 1.070032925  | 4.761806078 | 4.409884476 |
| <b>E9VUM2</b>  | TY-2482_chromosome | - | 2838590 | 2839718 | 92.85078174 | 106.9997588 | 89.36850678 | 85.37814049 | 76.62709347 | 49.5058044  | 0.138238098  | 0.407349226 | 0.337974214 |
| <b>B7L5R2</b>  | TY-2482_chromosome | + | 2840175 | 2840555 | 887.244868  | 903.2145373 | 787.7757531 | 630.8159853 | 586.0991215 | 674.395663  | 0.421806223  | 4.330893742 | 4.000161439 |
| <b>B7L5R3</b>  | TY-2482_chromosome | - | 2840760 | 2841860 | 228.1980346 | 287.9355861 | 241.5804985 | 181.0397273 | 184.6363063 | 183.1939752 | 0.403741849  | 2.509040103 | 2.261937684 |
| <b>B7L5R4</b>  | TY-2482_chromosome | - | 2842134 | 2842985 | 11577.49264 | 11783.35931 | 12018.18496 | 17333.82137 | 17594.44598 | 19150.44974 | -0.606687901 | 1.129074049 | 0.98212746  |
| <b>B7L5R5</b>  | TY-2482_chromosome | - | 2843233 | 2844288 | 2022.116606 | 2196.781916 | 1968.587079 | 2008.823949 | 1998.261114 | 1878.508329 | 0.038528245  | 0.274975351 | 0.226522737 |
| <b>B7L5R6</b>  | TY-2482_chromosome | - | 2844284 | 2844949 | 1607.557364 | 1552.425683 | 1689.39947  | 1657.191052 | 1448.731869 | 1326.139067 | 0.142236104  | 0.607698059 | 0.51300085  |
| <b>B7L5R0</b>  | TY-2482_chromosome | - | 2844955 | 2846445 | 2549.417911 | 3047.131657 | 3044.168848 | 3765.528709 | 3033.272378 | 2956.882653 | -0.202975117 | 0.440600829 | 0.367226854 |
| <b>B7L5R8</b>  | TY-2482_chromosome | + | 2846595 | 2847188 | 1084.307849 | 1111.290328 | 1127.776742 | 1060.221567 | 1059.93838  | 1035.256665 | 0.073848883  | 0.341803001 | 0.283055194 |
| <b>B7L5R7</b>  | TY-2482_chromosome | - | 2847456 | 2847812 | 560.5508318 | 508.9409613 | 554.4995525 | 500.6661174 | 482.6258009 | 532.4941687 | 0.127898295  | 0.445130326 | 0.371447209 |

|               |                    |   |         |         |             |             |             |             |             |             |               |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|
| <b>B7L5S0</b> | TY-2482_chromosome | + | 2847953 | 2848576 | 3217.339144 | 2594.368478 | 2819.007386 | 2066.35328  | 1876.870034 | 2054.360444 | 0.564445248   | 2.746666988 | 2.487567151 |
| <b>B7L5S2</b> | TY-2482_chromosome | + | 2848653 | 2850848 | 4451.489672 | 3904.458436 | 4363.235768 | 3650.469241 | 3736.139289 | 3851.239299 | 0.215485692   | 0.460089101 | 0.383717485 |
| <b>A1AH06</b> | TY-2482_chromosome | + | 2850914 | 2851213 | 424.0251048 | 376.5064729 | 426.5458993 | 407.436714  | 459.9013869 | 500.5433711 | -0.114991147  | 0.611008236 | 0.515553002 |
| <b>B7L5S4</b> | TY-2482_chromosome | + | 2851419 | 2852081 | 261.1229712 | 267.2981362 | 194.84196   | 271.2417198 | 318.5920932 | 343.5811837 | -0.4201443331 | 1.826489978 | 1.624313393 |
| <b>C8TJR1</b> | TY-2482_chromosome | + | 2852115 | 2852711 | 7167.824391 | 7111.80285  | 7275.572712 | 5801.430625 | 5629.674075 | 5917.867686 | 0.319337465   | 0.511060147 | 0.426733047 |
| <b>B7L5S6</b> | TY-2482_chromosome | - | 2852721 | 2853935 | 1942.058314 | 1899.544871 | 1776.096898 | 2368.679092 | 2148.652054 | 2487.365413 | -0.326045942  | 2.325286207 | 2.096066033 |
| <b>B7L5S3</b> | TY-2482_chromosome | + | 2854067 | 2855113 | 662.2325967 | 837.2313436 | 699.9368664 | 138.7870318 | 145.4019765 | 133.701101  | 2.329592648   | 69.74724764 | 68.66492312 |
| <b>B7L5S7</b> | TY-2482_chromosome | + | 2855171 | 2855755 | 516.0292595 | 618.9499739 | 600.3899884 | 948.0034078 | 964.7197444 | 945.5334751 | -0.746508564  | 10.41821745 | 9.904634304 |
| <b>B7L5S8</b> | TY-2482_chromosome | + | 2855869 | 2857440 | 2105.616879 | 1737.747725 | 1809.086212 | 6556.753478 | 3771.8605   | 3525.498257 | -1.28479902   | 7.531889483 | 7.088887411 |
| <b>B7L5T0</b> | TY-2482_chromosome | + | 2857443 | 2858384 | 1138.615212 | 932.8313403 | 1007.283921 | 2845.914706 | 1947.799079 | 1861.666657 | -1.090126528  | 14.42203687 | 13.84165527 |
| <b>B7L5T1</b> | TY-2482_chromosome | + | 2858384 | 2859214 | 882.0889416 | 759.8121219 | 824.71021   | 1696.298381 | 1422.447868 | 1416.617222 | -0.853142893  | 14.71381583 | 14.12814625 |
| <b>B7L5T2</b> | TY-2482_chromosome | + | 2859217 | 2859978 | 946.859233  | 798.3126515 | 824.9109684 | 1764.332639 | 1548.464494 | 1522.090701 | -0.891292153  | 16.2869314  | 15.67891487 |
| <b>B7L5S9</b> | TY-2482_chromosome | + | 2859978 | 2860781 | 592.6849779 | 499.0385624 | 434.0760232 | 1283.960765 | 1193.564799 | 1198.653984 | -0.137238662  | 25.76112275 | 25.03827998 |
| <b>B7L5T4</b> | TY-2482_chromosome | + | 2860790 | 2861188 | 440.627576  | 470.1085132 | 434.0760232 | 783.4264779 | 830.1248496 | 810.7094603 | -0.872085135  | 13.6184128  | 13.05143602 |
| <b>B7L5T5</b> | TY-2482_chromosome | - | 2861314 | 2861670 | 654.8238514 | 638.8449945 | 607.9747354 | 1127.086386 | 1181.787346 | 1128.719132 | -0.860958201  | 15.60642872 | 15.00367218 |
| <b>C6UW13</b> | TY-2482_chromosome | - | 2861670 | 2861942 | 536.1947633 | 532.5246715 | 493.0908555 | 791.0413479 | 772.9240909 | 737.2455048 | -0.575390054  | 6.432601709 | 6.022799933 |
| <b>B7L5T6</b> | TY-2482_chromosome | - | 2862004 | 2863125 | 1107.248201 | 907.8937168 | 816.7681662 | 2057.82735  | 2153.387059 | 1881.997974 | -1.10349201   | 19.26470618 | 18.62257387 |
| <b>B7L5T7</b> | TY-2482_chromosome | - | 2863128 | 2865860 | 1565.947171 | 1394.684036 | 1216.1427   | 5669.77475  | 5634.015629 | 4719.068183 | -1.956813415  | 20.41904756 | 19.76413526 |
| <b>B7L5T3</b> | TY-2482_chromosome | - | 2865860 | 2866924 | 1241.772782 | 1169.751428 | 1291.421742 | 3611.490156 | 3636.703716 | 3671.564635 | -1.534518881  | 19.73096171 | 19.08306689 |
| <b>B5YUR9</b> | TY-2482_chromosome | - | 2867293 | 2868911 | 51.77232756 | 42.72328198 | 50.2243455  | 39.69499797 | 52.65079302 | 71.44575044 | -0.12066775   | 0.290018548 | 0.239322526 |
| <b>D3H0S6</b> | TY-2482_chromosome | - | 2869176 | 2870815 | 6.323256247 | 1.43220247  | 5.718814089 | 20.02312372 | 67.14132748 | 64.35789049 | -0.319884836  | 12.1840857  | 11.64023509 |
| <b>B7L5U4</b> | TY-2482_chromosome | + | 2871182 | 2872201 | 101.1511786 | 98.01125178 | 120.2010451 | 66.3658297  | 76.93373072 | 64.04700911 | -6.957981215  | 2.911515643 | 2.644765651 |
| <b>B7L5U5</b> | TY-2482_chromosome | - | 2872897 | 2873361 | 142.6323384 | 120.7169027 | 133.6336857 | 204.7087884 | 220.3743745 | 222.9701129 | -0.670867515  | 4.744456566 | 4.393121452 |
| <b>B7L5U2</b> | TY-2482_chromosome | - | 2873549 | 2874946 | 564.1941345 | 679.9744571 | 492.1071025 | 735.2740682 | 833.6706015 | 802.0351596 | -0.533430486  | 3.758059435 | 3.450896472 |
| <b>B7L5U7</b> | TY-2482_chromosome | - | 2874946 | 2875629 | 471.8257103 | 561.1239498 | 478.6981823 | 576.9749436 | 556.1428797 | 589.8743829 | -0.23952104   | 1.044824146 | 0.904657871 |
| <b>B7L5U8</b> | TY-2482_chromosome | - | 2875681 | 2876607 | 577.9523272 | 744.100758  | 673.7855075 | 565.0878873 | 595.447568  | 607.3919141 | 0.128131759   | 0.780636499 | 0.666014031 |
| <b>B7L5U9</b> | TY-2482_chromosome | - | 2876615 | 2876992 | 605.1992605 | 666.0407839 | 689.386589  | 380.6809953 | 361.3776805 | 390.1060126 | 0.789271254   | 11.1572023  | 10.62801408 |
| <b>B7L5V0</b> | TY-2482_chromosome | - | 2877035 | 2877931 | 411.8253356 | 455.1655614 | 478.1338661 | 307.9724665 | 328.9255971 | 290.5564848 | 0.532272466   | 4.722203916 | 4.371844526 |
| <b>B7L5V1</b> | TY-2482_chromosome | - | 2877931 | 2879751 | 974.4664547 | 825.7283139 | 837.8911384 | 668.6710656 | 653.4599611 | 588.3148567 | 0.482415458   | 4.742764423 | 4.39162463  |
| <b>B7L5U6</b> | TY-2482_chromosome | + | 2879980 | 2880426 | 93.75591348 | 88.15441498 | 75.20761621 | 78.63372938 | 59.59358913 | 91.67033127 | -0.087610595  | 0.14549598  | 0.117281621 |
| <b>B7L5V2</b> | TY-2482_chromosome | + | 2880718 | 2881452 | 277.3875679 | 232.1933927 | 252.9404924 | 538.3264267 | 618.6993564 | 534.1356436 | -1.116524742  | 16.98474106 | 16.36709297 |
| <b>A4Y217</b> | TY-2482_chromosome | - | 2881492 | 2881686 | 152.1811086 | 178.5401667 | 209.0469196 | 213.8319797 | 201.7924779 | 188.8074339 | -0.153184128  | 0.488339896 | 0.407485066 |
| <b>B7L5V4</b> | TY-2482_chromosome | - | 2881730 | 2884174 | 1087.616375 | 1170.225507 | 1104.951125 | 831.3788308 | 811.1316521 | 764.3557981 | 0.459823722   | 5.518449034 | 5.135094514 |
| <b>B7L5V5</b> | TY-2482_chromosome | - | 2884304 | 2884747 | 476.0500311 | 456.4494225 | 451.2762032 | 206.2938232 | 230.6868564 | 217.2324208 | 1.08376796    | 16.87128503 | 16.25651307 |
| <b>B7L5V6</b> | TY-2482_chromosome | - | 2884831 | 2887974 | 1460.885077 | 1319.81284  | 1402.258512 | 902.7739942 | 942.9403049 | 931.8104907 | 0.614001483   | 8.686791987 | 8.213826692 |
| <b>B7L5V7</b> | TY-2482_chromosome | - | 2887988 | 2889277 | 547.5450345 | 482.4743594 | 554.3762943 | 467.8392856 | 455.6901228 | 434.7728452 | 0.258147042   | 1.305080805 | 1.143995455 |
| <b>B7L5V3</b> | TY-2482_chromosome | - | 2889394 | 2889744 | 165.1973885 | 194.9765463 | 226.2987445 | 176.090621  | 149.2801095 | 160.1064405 | 0.281837857   | 0.992451041 | 0.856469329 |
| <b>B7L5V8</b> | TY-2482_chromosome | - | 2889775 | 2891460 | 730.2971868 | 846.0713352 | 771.6237033 | 770.4681077 | 797.8844172 | 885.3363934 | -0.09390219   | 0.287158046 | 0.237048248 |
| <b>B7L5W2</b> | TY-2482_chromosome | + | 2892020 | 2893498 | 1422.537429 | 1548.122698 | 1489.912681 | 1194.142212 | 1097.36728  | 1144.461928 | 0.358110158   | 3.751087284 | 3.444277119 |
| <b>B7L5W1</b> | TY-2482_chromosome | + | 2893629 | 2894174 | 339.6204683 | 314.2056186 | 344.6878054 | 383.83764   | 426.5844555 | 491.0920047 | -0.34911742   | 2.362768986 | 2.125091598 |
| <b>B7L5W0</b> | TY-2482_chromosome | + | 2894325 | 2894672 | 9450.240465 | 10464.56706 | 10302.70907 | 3946.986912 | 4578.812113 | 4296.742767 | 1.224150207   | 3.992381727 | 3.674860921 |
| <b>B7L5W4</b> | TY-2482_chromosome | - | 2894847 | 2896730 | 609.5413592 | 595.8486771 | 619.1780097 | 1099.126736 | 1023.139335 | 1060.212947 | -0.793986183  | 13.47780124 | 12.91242643 |
| <b>B7L5W5</b> | TY-2482_chromosome | - | 2897237 | 2897563 | 67.73575933 | 42.31015919 | 67.18585419 | 97.27589422 | 103.9589528 | 113.6606046 | -0.715667564  | 3.720880942 | 3.414599437 |
| <b>Q19NI3</b> | TY-2482_chromosome | - | 2898827 | 2900389 | 157.5781054 | 168.7122815 | 139.8116375 | 231.6858691 | 274.9469063 | 299.4411857 | -0.824464497  | 5.983839732 | 5.587896084 |
| <b>B7L5W7</b> | TY-2482_chromosome | - | 2900424 | 2901869 | 161.9238306 | 185.0642446 | 224.7682007 | 188.0601216 | 219.319526  | 217.9859406 | -0.101291365  | 0.338842093 | 0.280600256 |
| <b>B7L5X1</b> | TY-2482_chromosome | - | 2901872 | 2903992 | 386.1285013 | 509.4116774 | 436.8611689 | 263.9690667 | 333.572901  | 398.51905   | 0.369897306   | 2.200376668 | 1.973247056 |
| <b>B7L5X0</b> | TY-2482_chromosome | - | 2903982 | 2904821 | 663.5435814 | 798.4409372 | 638.3679648 | 511.5372076 | 511.9480376 | 597.2777198 | 0.313025119   | 2.547392821 | 2.298287976 |
| <b>B7L5X3</b> | TY-2482_chromosome | - | 2904967 | 2906166 | 1128.167293 | 1144.951079 | 1172.301845 | 828.7883615 | 893.902139  | 742.8787239 | 0.481143217   | 5.335578482 | 4.958902336 |
| <b>B7L5X2</b> | TY-2482_chromosome | + | 2906398 | 2907894 | 3797.984739 | 3747.486887 | 3152.809463 | 6045.925819 | 5900.212215 | 5436.224253 | -0.734716107  | 1.772690355 | 1.573827904 |
| <b>B7L5X4</b> | TY-2482_chromosome | - | 2907971 | 2908303 | 1958.920218 | 2077.432613 | 2120.47736  | 364.2395566 | 369.277404  | 362.6909286 | 2.486442373   | 134.5458688 | 133.1376288 |
| <b>B7L5X5</b> | TY-2482_chromosome | + | 2908694 | 2909125 | 11094.0462  | 9415.740684 | 10377.49811 | 14901.36775 | 12844.96286 | 13857.01609 | -0.395489037  | 0.690708993 | 0.586052724 |
| <b>B7L5X7</b> | TY-2482_chromosome | + | 2909446 | 2910912 | 3062.63127  | 3299.558854 | 3407.718035 | 5968.671585 | 4970.185032 | 5059.697551 | -0.71866252   | 2.131467914 | 1.909090975 |
| <b>B7L5X8</b> | TY-2482_chromosome | - | 2910967 | 2911716 | 849.7506291 | 832.2962093 | 750.3783325 | 796.3301656 | 868.663023  | 750.8797001 | -0.009801379  | 0.020562231 | 0.01608669  |
| <b>B7L5X6</b> | TY-2482_chromosome | - | 2911727 | 2913766 | 7311.686464 | 6049.295787 | 6531.490747 | 3616.191528 | 3495.308616 | 3363.278421 | 0.958045141   | 2.743722996 | 2.484781113 |
| <b>B7L5Y0</b> | TY-2482_chromosome | + | 2913969 | 2914808 | 1856.757769 | 1407.295973 | 1612.095777 | 2802.706304 | 2643.873023 | 2531.295074 | -0.659311434  | 8.340117914 | 7.8745854   |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7L5Y1 | TY-2482_chromosome | + | 2914883 | 2916232 | 4471.140124 | 4130.595981 | 4416.453574 | 4973.533695 | 4987.137447 | 4739.387842 | -0.155687825 | 0.264591765 | 0.21778904  |
| B7L5Y4 | TY-2482_chromosome | + | 2917112 | 2917462 | 100.8623893 | 96.64050704 | 106.1643219 | 40.45464338 | 45.1879196  | 40.78775041 | 1.280433691  | 9.264195404 | 8.777041369 |
| B7L5Y2 | TY-2482_chromosome | + | 2917519 | 2918805 | 462.9795756 | 454.7973393 | 416.9894443 | 139.3758787 | 141.2404378 | 184.7666997 | 1.515320552  | 26.5421225  | 25.80951989 |
| B7L5Y6 | TY-2482_chromosome | + | 2918821 | 2919243 | 586.6907289 | 578.1268481 | 569.057155  | 225.849413  | 216.6792894 | 229.8364693 | 1.365494899  | 29.4472524  | 28.68398098 |
| B7L5Y7 | TY-2482_chromosome | - | 2919383 | 2919676 | 373.5299858 | 419.3503952 | 281.1752742 | 162.9015056 | 171.222992  | 210.3727661 | 0.899566816  | 8.717528792 | 8.243787278 |
| B7L5Y5 | TY-2482_chromosome | + | 2919771 | 2920793 | 52.3878184  | 59.63199886 | 57.4199074  | 49.06096388 | 44.8824999  | 52.31070354 | 0.191948708  | 0.401468343 | 0.333418177 |
| Q0SZF7 | TY-2482_chromosome | + | 2922680 | 2923408 | 707.8286187 | 789.4210808 | 878.7525126 | 85.61791626 | 97.09045571 | 79.59947369 | 3.184271051  | 115.990099  | 114.6845214 |
| B5YVF1 | TY-2482_chromosome | - | 2924142 | 2924798 | 37.99030354 | 57.70331196 | 39.13974594 | 31.06590387 | 23.62072316 | 30.62911859 | 0.545601576  | 1.521616542 | 1.341987489 |
| C8TJU6 | TY-2482_chromosome | - | 2924853 | 2925188 | 264.0557965 | 313.9858051 | 308.7052696 | 113.6489107 | 121.1673035 | 107.3658075 | 1.348068032  | 18.31303745 | 17.68071586 |
| B7L5Z4 | TY-2482_chromosome | - | 2925295 | 2925624 | 611.4754359 | 582.465262  | 716.3367931 | 222.2423773 | 245.7060641 | 238.0407747 | 1.481356958  | 29.69414559 | 28.92732889 |
| B7L5Z3 | TY-2482_chromosome | + | 2925879 | 2926448 | 180.7814367 | 211.9734349 | 181.2747056 | 143.299238  | 140.4953581 | 139.3830476 | 0.390322867  | 2.086163888 | 1.865733787 |
| B7L5Z6 | TY-2482_chromosome | + | 2927250 | 2927774 | 163.3283734 | 188.4657787 | 203.5835325 | 37.09509538 | 52.81791711 | 56.38861193 | 1.932776903  | 23.67128602 | 22.97127079 |
| D7Z0Y0 | TY-2482_chromosome | - | 2927730 | 2928056 | 65.59225493 | 87.7620762  | 69.18752471 | 27.38002752 | 27.61239674 | 38.16401897 | 1.187918892  | 6.299285121 | 5.892823232 |
| B7L5Z7 | TY-2482_chromosome | + | 2928116 | 2929270 | 129.6481176 | 143.0957207 | 95.7216159  | 102.942794  | 120.5641561 | 104.6893129 | 0.083649919  | 0.337074745 | 0.279281605 |
| B7L5Z5 | TY-2482_chromosome | + | 2929298 | 2932408 | 472.8212718 | 405.9696111 | 495.3188616 | 522.2563763 | 580.1414823 | 566.3388536 | -0.226352777 | 1.570667628 | 1.386940804 |
| B7L5Z9 | TY-2482_chromosome | - | 2932777 | 2933502 | 603.3045541 | 602.2233574 | 669.1975797 | 269.788975  | 372.295524  | 330.6298706 | 0.97134927   | 12.96559225 | 12.40980891 |
| gadY   | TY-2482_chromosome | + | 2933748 | 2933852 | 301.3627064 | 381.9331053 | 317.7568484 | 130.3593758 | 200.4350949 | 207.1267803 | 0.844525547  | 7.04521823  | 6.61948143  |
| B7L600 | TY-2482_chromosome | - | 2933873 | 2934694 | 3311.525659 | 3962.048211 | 3642.140444 | 664.6427638 | 893.4934074 | 902.9491458 | 1.20169256   | 61.233959   | 60.2142028  |
| B7L5Z8 | TY-2482_chromosome | - | 2935067 | 2936464 | 363.3873405 | 303.8983908 | 316.2972093 | 183.2578822 | 158.6118379 | 164.6284246 | 0.980350972  | 11.10168393 | 10.57337753 |
| B7L601 | TY-2482_chromosome | - | 2936678 | 2938072 | 415.5322746 | 594.7069043 | 461.4905075 | 1318.748646 | 1238.239146 | 1391.599226 | -1.516284322 | 29.98215561 | 29.21176444 |
| B7L603 | TY-2482_chromosome | + | 2938477 | 2940123 | 950.9941356 | 1024.978294 | 926.9346832 | 402.3558306 | 394.003875  | 378.6470217 | 1.274179669  | 33.35896637 | 32.54492056 |
| B7L604 | TY-2482_chromosome | - | 2940180 | 2940779 | 176.7936318 | 171.2855104 | 151.2853578 | 137.2557856 | 183.0109457 | 186.0882324 | -0.30632922  | 0.0464834   | 0.036539642 |
| B7L605 | TY-2482_chromosome | + | 2941227 | 2942195 | 201.3760101 | 190.3154976 | 192.6120239 | 149.1385747 | 125.0437932 | 125.785797  | 0.548844324  | 3.214681308 | 2.932547763 |
| B7L606 | TY-2482_chromosome | + | 2942247 | 2943257 | 2007.138835 | 1928.725559 | 1919.592986 | 714.7723065 | 679.4791487 | 591.353223  | 1.557160679  | 50.42995536 | 49.4898354  |
| B7L607 | TY-2482_chromosome | + | 2943671 | 2944990 | 258.5025842 | 256.4569173 | 262.8924883 | 731.4486287 | 795.3684291 | 772.5271438 | -1.557096112 | 35.95792997 | 35.12297825 |
| Q8Z283 | TY-2482_chromosome | - | 2945230 | 2946387 | 480.0103122 | 552.3429539 | 517.2425806 | 5328.406843 | 5764.531761 | 6249.721056 | -3.507696477 | 61.03325528 | 61.00332556 |
| B7L602 | TY-2482_chromosome | - | 2946354 | 2947343 | 714.5196104 | 593.7826904 | 648.0417325 | 14928.38433 | 14283.61529 | 15418.87611 | -4.474300293 | 33.84693343 | 33.02890063 |
| B7L609 | TY-2482_chromosome | - | 2947401 | 2948165 | 341.3768522 | 359.0406754 | 326.3870961 | 30850.37127 | 26950.975   | 29646.42483 | -6.436669646 | 48.54690503 | 47.61948247 |
| B5YVH2 | TY-2482_chromosome | - | 2948168 | 2948392 | 70.85757247 | 65.55592734 | 52.33391866 | 3457.377309 | 3273.674561 | 3855.343493 | -5.832141448 | 266.4966493 | 264.6676065 |
| B7L608 | TY-2482_chromosome | + | 2948397 | 2949323 | 892.3711576 | 941.9624959 | 847.9617075 | 61658.40923 | 51670.19383 | 54223.67117 | -5.995365629 | 39.96931501 | 39.1016291  |
| B7L611 | TY-2482_chromosome | - | 2949425 | 2950918 | 1206.575191 | 1364.394715 | 1331.760311 | 11110.05465 | 10715.69148 | 11562.72474 | -3.113755053 | 20.18054957 | 19.92196018 |
| B7L612 | TY-2482_chromosome | - | 2951142 | 2952425 | 3322.130233 | 3327.104085 | 3161.014095 | 1909.157772 | 1762.292927 | 1326.450392 | 0.950626281  | 7.434302603 | 6.995860725 |
| Q8Z288 | TY-2482_chromosome | - | 2952545 | 2954536 | 1121.838262 | 1156.520786 | 1232.477781 | 1172.805564 | 1101.051291 | 1008.163778 | 0.100922687  | 0.467294932 | 0.38915641  |
| B7L615 | TY-2482_chromosome | - | 2954681 | 2958151 | 6186.160751 | 6244.547543 | 6279.948246 | 2212.756016 | 2155.917401 | 2088.984843 | 1.532758689  | 11.28257387 | 10.75072941 |
| B7L614 | TY-2482_chromosome | - | 2958136 | 2959239 | 1924.543709 | 2063.788842 | 1857.964141 | 716.2098082 | 728.926763  | 702.3838972 | 1.415775213  | 46.46494071 | 45.5056972  |
| B7L617 | TY-2482_chromosome | - | 2959249 | 2961585 | 4536.141226 | 4186.122888 | 4463.876984 | 1945.581814 | 2090.940126 | 1820.804409 | 1.188877542  | 9.414854114 | 8.923944575 |
| B7L616 | TY-2482_chromosome | - | 2961599 | 2964214 | 3166.552966 | 3442.687753 | 3347.572095 | 2594.746403 | 2670.031875 | 2186.023737 | 0.396923672  | 1.681777522 | 1.489195453 |
| B7L619 | TY-2482_chromosome | - | 2964214 | 2964963 | 1810.010465 | 2159.546682 | 2291.107242 | 706.4992271 | 670.3908861 | 663.6754427 | 1.608140984  | 48.79132125 | 47.862424   |
| B7L620 | TY-2482_chromosome | - | 2964978 | 2965163 | 1170.153877 | 1547.963994 | 1728.981668 | 294.6993281 | 285.808483  | 321.2609671 | 2.299277528  | 68.97348938 | 67.89846409 |
| B7L621 | TY-2482_chromosome | + | 2965436 | 2967005 | 5975.141691 | 6602.726581 | 6203.883808 | 3630.4065   | 3489.257726 | 3612.182058 | 0.783562628  | 2.225601964 | 1.997296597 |
| B7L618 | TY-2482_chromosome | + | 2967005 | 2967193 | 184.417037  | 233.4919039 | 206.9244942 | 523.2048263 | 500.3189347 | 435.3005536 | -1.279507495 | 17.09629895 | 16.47756738 |
| B7L623 | TY-2482_chromosome | + | 2967193 | 2968869 | 698.963601  | 772.8008092 | 634.1024237 | 2775.766827 | 2873.028135 | 2470.741334 | -2.001512401 | 57.29061593 | 56.30330447 |
| D8E601 | TY-2482_chromosome | + | 2969031 | 2969423 | 811.6571802 | 628.2534624 | 682.6688795 | 676.9701148 | 681.7392384 | 710.515073  | 0.081295125  | 0.160098372 | 0.128716007 |
| D8E601 | TY-2482_chromosome | + | 2969514 | 2969906 | 1322.439873 | 1174.400753 | 1153.994149 | 1106.979334 | 1128.566519 | 1218.963171 | 0.093593503  | 0.371384822 | 0.306982508 |
| D8E601 | TY-2482_chromosome | + | 2969997 | 2970389 | 1441.90482  | 1142.09707  | 1040.920998 | 1610.405018 | 1681.625351 | 1844.748206 | -0.486113044 | 4.609608657 | 4.264480626 |
| D8E601 | TY-2482_chromosome | + | 2970485 | 2970811 | 680.4371417 | 617.6950516 | 579.4055069 | 449.3637853 | 492.0597066 | 466.2836674 | 0.415591004  | 3.512589774 | 3.215025834 |
| B7L627 | TY-2482_chromosome | + | 2970990 | 2972258 | 371.3348008 | 476.1929062 | 399.6139996 | 900.9188232 | 1033.128887 | 948.2615741 | -1.271667317 | 23.241556   | 22.54861194 |
| B7L622 | TY-2482_chromosome | - | 2972294 | 2973295 | 488.6282101 | 420.0460547 | 432.6575992 | 433.6732301 | 446.1692378 | 424.7452474 | 0.06096165   | 0.14865569  | 0.119697994 |
| B7L629 | TY-2482_chromosome | - | 2973295 | 2974275 | 257.0616657 | 295.1051182 | 247.4667029 | 174.6495506 | 193.1554218 | 130.9126269 | 0.621161609  | 4.393954314 | 4.058915542 |
| B7L630 | TY-2482_chromosome | - | 2974289 | 2975188 | 204.3269315 | 180.2650042 | 182.6641757 | 180.2601774 | 199.4665864 | 165.1754056 | 0.069511094  | 0.150622573 | 0.121013411 |
| B7L631 | TY-2482_chromosome | - | 2975201 | 2976217 | 94.20196998 | 94.14502545 | 89.24587152 | 120.8992469 | 154.8006818 | 109.1799679 | -0.486451952 | 1.797223991 | 1.596846157 |
| E9TED3 | TY-2482_chromosome | + | 2976180 | 2976392 | 51.50900028 | 48.83365425 | 39.30381416 | 64.55545803 | 76.89227003 | 53.43682746 | -0.51721324  | 1.332217575 | 1.168223003 |
| B7L632 | TY-2482_chromosome | - | 2976371 | 2977975 | 1094.249276 | 786.051155  | 913.9035223 | 929.8302787 | 862.2399259 | 798.2496915 | 0.166136111  | 0.497567379 | 0.415242854 |
| Q1R551 | TY-2482_chromosome | - | 2978330 | 2978836 | 266.5787714 | 304.5578444 | 230.5219054 | 321.2725917 | 412.4895249 | 420.4003071 | -0.586456099 | 3.472535079 | 3.177895692 |
| proK   | TY-2482_chromosome | - | 2978719 | 2978795 | 110.3470309 | 126.3715687 | 86.97146276 | 122.3998521 | 154.9234895 | 148.9318892 | -0.474235271 | 1.493073417 | 1.315806093 |

|               |                    |   |         |         |             |             |             |             |             |              |               |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|-------------|-------------|
| <b>B7L764</b> | TY-2482_chromosome | - | 2978890 | 2980578 | 856.7111928 | 914.3332138 | 839.2605764 | 3482.342646 | 3584.563052 | 3869.872037  | -2.087255162  | 48.76906753 | 47.84090825 |
| <b>B7L6V8</b> | TY-2482_chromosome | - | 2980834 | 2981355 | 69.25489151 | 65.12334382 | 50.91527348 | 108.578578  | 128.6302939 | 131.5558494  | -1.020605027  | 5.729030273 | 5.338251734 |
| <b>B7L6V7</b> | TY-2482_chromosome | - | 2981364 | 2982416 | 78.87630009 | 63.78570724 | 62.16209923 | 103.4600882 | 115.7862929 | 103.8065344  | -0.641424192  | 2.877632065 | 2.612487006 |
| <b>C8TJB8</b> | TY-2482_chromosome | - | 2982409 | 2984901 | 375.2329926 | 331.9669945 | 373.4197098 | 313.9839207 | 316.8153671 | 311.118283   | -0.231594033  | 0.988874435 | 0.853606045 |
| <b>B7L6W1</b> | TY-2482_chromosome | - | 2984985 | 2985668 | 9.746078637 | 10.49007241 | 8.755363319 | 13.03920171 | 21.11139051 | 19.57715735  | -0.922298032  | 1.369687063 | 1.202380168 |
| <b>B7L6W2</b> | TY-2482_chromosome | - | 2985755 | 2986276 | 18.97961545 | 19.27037712 | 10.66954306 | 39.36867511 | 34.9672428  | 36.25333979  | -1.257776144  | 3.112802747 | 2.835638301 |
| <b>B7L6V9</b> | TY-2482_chromosome | - | 2986603 | 2987847 | 56.35201854 | 53.93667052 | 42.2335983  | 52.16220973 | 53.34780148 | 81.62512736  | -0.315007898  | 0.624895408 | 0.527158126 |
| <b>B7L6W3</b> | TY-2482_chromosome | - | 2988034 | 2988729 | 604.0099147 | 494.4280004 | 556.0220137 | 233.6906211 | 242.2102162 | 234.6952536  | 1.261178672   | 22.09788389 | 21.41955599 |
| <b>A1AH92</b> | TY-2482_chromosome | + | 2988722 | 2989447 | 551.6693429 | 580.2409595 | 683.265683  | 661.0773003 | 630.682607  | 708.8820631  | -0.111124147  | 0.60930602  | 0.514175816 |
| <b>B7L6W6</b> | TY-2482_chromosome | + | 2989447 | 2989884 | 400.9867689 | 318.3424008 | 394.8515583 | 526.4395358 | 511.8521429 | 502.5596821  | -0.407782257  | 3.441644627 | 3.149057837 |
| <b>B7L6W4</b> | TY-2482_chromosome | - | 2989859 | 2992135 | 1816.765727 | 1593.070022 | 1747.019336 | 1626.489313 | 1480.157173 | 1452.64438   | 0.205477073   | 1.003929218 | 0.86723301  |
| <b>B7L6W8</b> | TY-2482_chromosome | + | 2992342 | 2992998 | 1604.164207 | 1519.106678 | 1623.4091   | 1010.029541 | 929.3941182 | 1031.014669  | 0.695901049   | 11.06502949 | 10.53760312 |
| <b>B7L6W9</b> | TY-2482_chromosome | + | 2993105 | 2994076 | 2331.587943 | 1818.381429 | 2143.530251 | 2258.779974 | 2093.180194 | 2121.291727  | 0.013760742   | 0.120958242 | 0.097085478 |
| <b>B7L6X0</b> | TY-2482_chromosome | - | 2994132 | 2994839 | 5048.884193 | 5483.057949 | 5775.36389  | 5168.173714 | 4745.544638 | 4736.182031  | 0.153051402   | 0.22179845  | 0.180984679 |
| <b>B7L6W7</b> | TY-2482_chromosome | + | 2995273 | 2995560 | 806.233226  | 842.5682894 | 776.0664675 | 155.3376386 | 205.0810827 | 157.365425   | 2.204661166   | 67.45393346 | 66.38506848 |
| <b>A1AH99</b> | TY-2482_chromosome | - | 2995784 | 2996203 | 105486.2533 | 109988.2881 | 98449.4066  | 211033.175  | 213031.3911 | 241696.9801  | -1.105883849  | 2.326031614 | 2.091052647 |
| <b>E8YB84</b> | TY-2482_chromosome | - | 2996163 | 2996456 | 324.0957834 | 283.5619439 | 240.6579701 | 455.6819672 | 595.9392312 | 599.4758372  | -0.965357082  | 10.27834221 | 9.767023968 |
| <b>B7L6X3</b> | TY-2482_chromosome | - | 2996725 | 2998791 | 16498.14303 | 14164.07018 | 14391.97903 | 12871.47987 | 12261.92191 | 10966.63544  | 0.334614835   | 0.456600614 | 0.3808509   |
| <b>B7L6X1</b> | TY-2482_chromosome | - | 2998804 | 2999712 | 5471.986897 | 4753.598319 | 4997.063833 | 7052.801895 | 6599.947222 | 6283.374645  | -0.367932323  | 0.704648714 | 0.598550895 |
| <b>B7L6X5</b> | TY-2482_chromosome | - | 2999810 | 3000106 | 64.44117764 | 67.29585565 | 43.93696466 | 59.51628754 | 54.98498018 | 48.24485017  | 0.02968299    | 0.145524401 | 0.117281621 |
| <b>B7L6X6</b> | TY-2482_chromosome | + | 3000281 | 3001273 | 296.1051752 | 262.5257979 | 356.9792207 | 296.0064413 | 271.659412  | 273.2714367  | 0.187729546   | 0.474014013 | 0.395041512 |
| <b>B7L6X4</b> | TY-2482_chromosome | - | 3001321 | 3001755 | 24.85500862 | 40.33853939 | 23.45053568 | 35.40643788 | 55.91870052 | 38.32181141  | -0.799667021  | 1.600519752 | 1.413727464 |
| <b>B7L6X8</b> | TY-2482_chromosome | - | 3001804 | 3002142 | 16.83590426 | 11.54929838 | 6.396765849 | 19.71917862 | 24.00879221 | 18.48013398  | -0.86548582   | 1.313712021 | 1.151364186 |
| <b>B7L6X7</b> | TY-2482_chromosome | - | 3002314 | 3003765 | 252.7462126 | 288.7618249 | 315.6058377 | 144.4287347 | 131.3891347 | 86.88002737  | 1.227869789   | 12.16866994 | 11.6257314  |
| <b>B7L6Y0</b> | TY-2482_chromosome | - | 3003840 | 3005207 | 315.7293192 | 367.643819  | 320.6104222 | 168.3128329 | 167.7117013 | 141.1209434  | 1.02243354    | 12.85511894 | 12.30110713 |
| <b>B7L6Y1</b> | TY-2482_chromosome | + | 3005573 | 3006562 | 59.84091714 | 48.65309426 | 61.87679851 | 62.64381202 | 72.76532432 | -0.201894521 | 0.515345792   | 0.430384377 | 0.430384377 |
| <b>B7L6Y2</b> | TY-2482_chromosome | + | 3006643 | 3008181 | 82.84322257 | 75.2163211  | 84.64376827 | 115.8295479 | 119.0255713 | 103.5593927  | -0.455870468  | 1.856684972 | 1.652007844 |
| <b>B7L6X9</b> | TY-2482_chromosome | + | 3008162 | 3009340 | 141.1747766 | 138.3342621 | 126.7347434 | 169.9759041 | 192.1345954 | 178.0583345  | -0.424342183  | 1.915917165 | 1.707882074 |
| <b>B7L6Y4</b> | TY-2482_chromosome | + | 3009255 | 3009428 | 44.68827149 | 51.37879113 | 62.60993964 | 88.39247423 | 76.54101834 | 73.22175314  | -0.571159413  | 1.978466662 | 1.7652033   |
| <b>B7L6Y5</b> | TY-2482_chromosome | + | 3009421 | 3010596 | 407.9458724 | 395.8173545 | 408.0199687 | 662.6226685 | 649.6913326 | 707.8864014  | -0.726154571  | 9.67075866  | 9.173239908 |
| <b>B7L6Y3</b> | TY-2482_chromosome | - | 3010798 | 3011619 | 2013.778936 | 2010.99161  | 1959.826094 | 3502.888745 | 4081.996886 | 4519.399036  | -1.012509921  | 7.003385835 | 6.579269108 |
| <b>B7L6Y6</b> | TY-2482_chromosome | + | 3011939 | 3013965 | 2415.146261 | 2415.779886 | 2260.23644  | 2887.403542 | 2533.127108 | 2689.018049  | -0.208283674  | 0.620055718 | 0.522961348 |
| <b>B7L6Y7</b> | TY-2482_chromosome | + | 3014146 | 3015396 | 1516.297392 | 1386.837547 | 1524.240919 | 2183.029275 | 2201.704212 | 2163.237464  | -0.537613391  | 6.587397613 | 6.174230066 |
| <b>B7L6Y9</b> | TY-2482_chromosome | - | 3015554 | 3016024 | 921.6896722 | 1007.156418 | 866.7286712 | 1153.827727 | 910.870185  | 1092.686753  | -0.216028984  | 0.960438405 | 0.828011647 |
| <b>B7L6Z0</b> | TY-2482_chromosome | - | 3016129 | 3016974 | 736.3528309 | 754.7939644 | 725.6725475 | 513.8313591 | 495.1570276 | 461.8234276  | 0.577594462   | 7.137682933 | 6.709854264 |
| <b>B7L6Z1</b> | TY-2482_chromosome | + | 3017175 | 3018170 | 59.52744399 | 43.89585039 | 51.80846843 | 46.09897403 | 44.03729545 | 41.12516636  | 0.288844842   | 0.521130168 | 0.435533509 |
| <b>B7L6Z4</b> | TY-2482_chromosome | + | 3019246 | 3020520 | 22.15986537 | 38.49116515 | 32.83743981 | 31.06808783 | 35.34805084 | 36.09120934  | -0.209681386  | 0.162838097 | 0.130987893 |
| <b>B7L6Z5</b> | TY-2482_chromosome | + | 3020536 | 3021519 | 24.17344325 | 25.59236297 | 19.06291952 | 40.07813458 | 40.02536186 | 34.54393472  | -0.0792754796 | 1.691474091 | 1.497806285 |
| <b>B7L6Z2</b> | TY-2482_chromosome | + | 3021526 | 3023019 | 197.0318624 | 175.3408926 | 123.2261331 | 119.5635456 | 199.161843  | 136.5920192  | 0.079483932   | 0.244723781 | 0.199963713 |
| <b>B7L6Z7</b> | TY-2482_chromosome | + | 3023019 | 3023678 | 28.77906488 | 20.51305374 | 24.52154911 | 38.5899065  | 27.64295026 | 26.07854445  | -0.282880627  | 0.507158883 | 0.423680177 |
| <b>C8TZI5</b> | TY-2482_chromosome | + | 3023641 | 3024531 | 46.60538882 | 43.5198659  | 34.99060328 | 56.69666616 | 58.96873287 | 39.9062494   | -0.352902616  | 0.645076544 | 0.54537363  |
| <b>B7L6Z9</b> | TY-2482_chromosome | + | 3024528 | 3025220 | 86.08112083 | 80.00014814 | 86.15586986 | 79.88588318 | 90.17666129 | 81.28787593  | 0.022605378   | 0.011385842 | 0.008943038 |
| <b>B7L700</b> | TY-2482_chromosome | - | 3025621 | 3026358 | 39.61336306 | 61.82854591 | 39.24521309 | 22.0965947  | 26.00156146 | 14.68277429  | 1.022193537   | 3.847559932 | 3.537386557 |
| <b>B7L701</b> | TY-2482_chromosome | + | 3026482 | 3027453 | 468.2673347 | 477.9717953 | 482.7096848 | 239.6317745 | 229.8828972 | 221.6353638  | 1.04422047    | 16.59837653 | 15.98681762 |
| <b>B7L6Z8</b> | TY-2482_chromosome | - | 3027456 | 3028589 | 130.1435535 | 150.1576929 | 118.2767925 | 98.91930809 | 109.2391459 | 109.2411197  | 0.270077193   | 1.057546593 | 0.916658898 |
| <b>B7L705</b> | TY-2482_chromosome | - | 3029466 | 3031001 | 480.8921997 | 471.7609958 | 439.9279741 | 130.5757123 | 129.2274534 | 100.3613436  | 1.930639089   | 43.33660134 | 42.4451848  |
| <b>B7L706</b> | TY-2482_chromosome | - | 3031169 | 3032317 | 74.74044046 | 84.3498938  | 65.12481105 | 193.288174  | 205.7676675 | 162.6448304  | -1.389456132  | 11.1583754  | 10.62859831 |
| <b>B7L704</b> | TY-2482_chromosome | - | 3032510 | 3034351 | 3339.835385 | 3042.005633 | 3257.033893 | 6823.394387 | 6320.446633 | 6061.478418  | -0.975334538  | 3.14163979  | 2.862825286 |
| <b>B7L708</b> | TY-2482_chromosome | - | 3034351 | 3035739 | 3752.895043 | 3448.552934 | 3949.282095 | 4771.990588 | 4238.902365 | 4426.922313  | -0.236587909  | 0.740720892 | 0.630381664 |
| <b>B7L709</b> | TY-2482_chromosome | - | 3035840 | 3036445 | 834.5946894 | 1101.758904 | 866.734393  | 804.7798322 | 716.2391258 | 766.5252829  | 0.20951666    | 1.75946017  | 1.561284785 |
| <b>B7L711</b> | TY-2482_chromosome | + | 3036674 | 3040636 | 657.664332  | 559.6382351 | 590.6385295 | 645.4618322 | 712.5962569 | 734.1379856  | -0.179191584  | 1.143635397 | 0.995099552 |
| <b>C8TME0</b> | TY-2482_chromosome | + | 3041369 | 3042208 | 234.9822017 | 305.5226098 | 277.2175252 | 1184.934156 | 1361.597008 | 1297.855675  | -2.279119913  | 73.01321565 | 71.90711783 |
| <b>B7L717</b> | TY-2482_chromosome | + | 3042253 | 3043194 | 372.3073039 | 358.1031317 | 393.4600943 | 2331.527558 | 2531.271594 | 2482.889901  | -2.685114974  | 123.7440817 | 122.3882298 |
| <b>B7L718</b> | TY-2482_chromosome | + | 3043209 | 3043667 | 17.47870939 | 3.642772927 | 17.01436632 | 246.2674308 | 472.3010383 | 436.312454   | -4.621738053  | 58.18409711 | 57.18739052 |
| <b>Q3YVV7</b> | TY-2482_chromosome | + | 3043837 | 3044285 | 10.36348878 | 1.604126116 | 3.285770318 | 142.4944391 | 330.3609627 | 303.4898226  | -5.390090943  | 45.26947102 | 44.36358813 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>D7Z8X7</b> | TY-2482_chromosome | + | 3044317 | 3044806 | 1.616922627 | 0.378542727 | 1.456974055 | 36.36227559 | 114.2710774 | 84.14716542 | -5.788900929 | 22.72652616 | 22.03770248  |
| <b>B7L715</b> | TY-2482_chromosome | - | 3045272 | 3046405 | 119.4850401 | 160.1242154 | 136.5462636 | 88.94946394 | 96.98514414 | 122.0798413 | 0.380701381  | 1.546797849 | 1.365322976  |
| <b>B7L721</b> | TY-2482_chromosome | - | 3046411 | 3046770 | 63.20715335 | 64.84381578 | 54.95675178 | 25.9346389  | 29.97955902 | 29.05327416 | 1.073704704  | 5.042816144 | 4.678995319  |
| <b>B7L722</b> | TY-2482_chromosome | + | 3047307 | 3049217 | 1678.539214 | 1438.166867 | 1603.333261 | 2982.937171 | 2780.754517 | 2052.41931  | -0.703478801 | 7.443764731 | 7.004366784  |
| <b>B7L723</b> | TY-2482_chromosome | + | 3049450 | 3050595 | 1435.35276  | 1461.403733 | 1484.094553 | 3375.701475 | 3181.379049 | 3062.597002 | -1.137151641 | 10.99583292 | 10.499686931 |
| <b>B7L720</b> | TY-2482_chromosome | + | 3050598 | 3051182 | 1024.139817 | 933.4276626 | 1163.183443 | 1465.178462 | 1389.770211 | 1540.264901 | -0.44098811  | 5.273694413 | 4.899702292  |
| <b>B7L724</b> | TY-2482_chromosome | - | 3051200 | 3051406 | 762.8207627 | 874.565038  | 820.3958596 | 560.282262  | 547.5282612 | 649.7861999 | 0.460983614  | 4.725930237 | 4.37518082   |
| <b>A7ZTF2</b> | TY-2482_chromosome | - | 3051610 | 3051984 | 2413.954801 | 2592.889091 | 2514.298126 | 1350.821924 | 1383.75841  | 1457.3418   | 0.831690848  | 13.92300191 | 13.3505338   |
| <b>B7L728</b> | TY-2482_chromosome | + | 3053324 | 3058171 | 1124.520834 | 1089.04398  | 1041.866809 | 879.4997526 | 940.8731805 | 938.8068555 | 0.235793266  | 1.710547388 | 1.515791124  |
| <b>B7L729</b> | TY-2482_chromosome | + | 3058543 | 3060195 | 158.8819116 | 141.2430211 | 143.8421835 | 384.3176186 | 409.1936945 | 411.6895298 | -1.423471583 | 22.03749345 | 21.36123462  |
| <b>B7L730</b> | TY-2482_chromosome | + | 3060198 | 3060971 | 181.5839975 | 158.4463487 | 163.9438247 | 379.324574  | 359.4853069 | 351.4874596 | -1.095776037 | 13.71933307 | 13.15010356  |
| <b>B7L725</b> | TY-2482_chromosome | + | 3060971 | 3062158 | 294.5669396 | 311.2392897 | 323.0879577 | 1498.547758 | 1430.262183 | 1193.834044 | -2.156871993 | 68.99115997 | 67.91509941  |
| <b>B7L732</b> | TY-2482_chromosome | + | 3062347 | 3062817 | 783.1312887 | 713.8250461 | 747.1457162 | 1436.966657 | 1682.982408 | 1655.748967 | -1.066815029 | 23.57893073 | 22.88065616  |
| <b>B7L731</b> | TY-2482_chromosome | - | 3062876 | 3063694 | 3177.497122 | 3051.722145 | 3179.449478 | 3720.722622 | 3566.992715 | 3510.216666 | -0.18833119  | 0.529323921 | 0.4487276252 |
| <b>B7L734</b> | TY-2482_chromosome | - | 3063777 | 3064793 | 10312.78198 | 9934.939568 | 10444.95604 | 8948.207482 | 7661.318885 | 7381.706941 | 0.362817506  | 0.561114201 | 0.470723369  |
| <b>B7L735</b> | TY-2482_chromosome | - | 3064796 | 3065260 | 8877.851727 | 8989.660011 | 9452.085911 | 8737.604139 | 7425.094522 | 7032.192001 | 0.237301221  | 0.334532721 | 0.277037621  |
| <b>B7L736</b> | TY-2482_chromosome | - | 3065326 | 3065574 | 3884.859218 | 3896.294683 | 4266.798589 | 3802.604717 | 3306.596574 | 3265.09661  | 0.228114374  | 0.581732083 | 0.489301045  |
| <b>B7L733</b> | TY-2482_chromosome | - | 3065719 | 3066147 | 3151.553049 | 3139.121278 | 3119.206311 | 3173.675568 | 3187.171535 | 2825.296626 | 0.029663437  | 0.069904972 | 0.055217713  |
| <b>B6I3J1</b> | TY-2482_chromosome | + | 3066171 | 3066365 | 208.2475161 | 234.7259427 | 200.0244956 | 154.6513247 | 145.8816591 | 143.8919723 | 0.4859286    | 3.048950239 | 2.775067216  |
| <b>B7L738</b> | TY-2482_chromosome | + | 3066392 | 3067933 | 27409.14583 | 22821.34832 | 25414.31629 | 34883.54725 | 29995.30976 | 31437.99142 | -0.311608163 | 0.475432543 | 0.396251297  |
| <b>B7L739</b> | TY-2482_chromosome | + | 3067970 | 3069226 | 2195.479157 | 2094.419133 | 1954.300419 | 4643.401535 | 4751.32584  | 4592.178344 | -1.171464548 | 8.750806895 | 8.27654713   |
| <b>B7L737</b> | TY-2482_chromosome | + | 3069233 | 3070189 | 608.8359105 | 520.0478703 | 530.3985412 | 1280.973324 | 1248.627874 | 1041.024474 | -0.109167067 | 20.67055414 | 20.01129688  |
| <b>B7L741</b> | TY-2482_chromosome | - | 3070182 | 3071213 | 63.89005036 | 60.29599533 | 82.6534282  | 187.4365275 | 195.2764061 | 184.426095  | -1.398118309 | 13.3969996  | 12.83322088  |
| <b>Q1R4X5</b> | TY-2482_chromosome | + | 3071443 | 3072465 | 8679.497133 | 8535.200249 | 9262.376861 | 8637.634498 | 8198.665162 | 7912.755939 | 0.112006696  | 0.118442249 | 0.09484514   |
| <b>B7L740</b> | TY-2482_chromosome | - | 3072490 | 3073683 | 9601.464713 | 10311.2681  | 11092.64428 | 10821.42786 | 10420.1027  | 10107.91331 | -0.01156256  | 0.017066855 | 0.013180034  |
| <b>B7L743</b> | TY-2482_chromosome | - | 3073961 | 3074815 | 1369.04179  | 1547.163852 | 1466.913961 | 1611.073352 | 2430.327266 | 2473.118316 | -0.583821515 | 4.531289266 | 4.189805149  |
| <b>B7L745</b> | TY-2482_chromosome | + | 3075119 | 3076048 | 6712.937262 | 6933.410869 | 7127.501912 | 6945.797828 | 6642.83986  | 6210.605857 | 0.06719848   | 0.084542621 | 0.067056656  |
| <b>B7L746</b> | TY-2482_chromosome | + | 3076061 | 3077104 | 4323.955935 | 4737.939501 | 4851.632862 | 5506.40653  | 5341.217353 | 5055.585139 | -0.201307301 | 0.292268001 | 0.241208692  |
| <b>B7L744</b> | TY-2482_chromosome | + | 3077111 | 3078100 | 2430.752859 | 3087.773494 | 2704.028353 | 2816.128139 | 2650.021145 | 2705.582323 | -0.047398853 | 0.016000598 | 0.012486369  |
| <b>B7L748</b> | TY-2482_chromosome | + | 3078100 | 3079305 | 2886.824185 | 3179.459253 | 2797.620531 | 1772.864489 | 2171.226615 | 2026.677732 | 0.536956044  | 3.142614668 | 2.863634814  |
| <b>B7L749</b> | TY-2482_chromosome | - | 3079347 | 3080486 | 2571.867536 | 2935.963158 | 2808.773817 | 1141.91617  | 1957.497808 | 1844.101556 | 0.739283271  | 6.392936613 | 5.983804822  |
| <b>B7L750</b> | TY-2482_chromosome | - | 3080498 | 3081508 | 1383.476764 | 1337.197519 | 1579.911681 | 496.6833875 | 1032.554285 | 873.4196439 | 0.888730803  | 6.633727407 | 6.219021508  |
| <b>B7L751</b> | TY-2482_chromosome | - | 3081536 | 3082240 | 1131.862703 | 1212.197055 | 1344.332098 | 362.8616015 | 719.205716  | 569.6663712 | 1.181854155  | 13.0690168  | 12.51030649  |
| <b>B7L752</b> | TY-2482_chromosome | - | 3082269 | 3083273 | 1445.211641 | 1473.236102 | 1558.659657 | 383.9418097 | 764.8415914 | 627.8365174 | 1.353393204  | 17.41052829 | 16.78707015  |
| <b>B7L753</b> | TY-2482_chromosome | - | 3083319 | 3084122 | 1670.813417 | 1720.308619 | 1563.468137 | 805.0813011 | 1023.255759 | 953.1250902 | 0.815509809  | 14.0623547  | 13.48728587  |
| <b>B7L754</b> | TY-2482_chromosome | - | 3084109 | 3085230 | 2093.889655 | 2385.039683 | 2168.169769 | 1936.781953 | 2034.942571 | 1876.699286 | 0.149075049  | 0.994193081 | 0.858092367  |
| <b>B7L755</b> | TY-2482_chromosome | - | 3085230 | 3086285 | 1583.755694 | 1868.335667 | 1748.488957 | 2185.500908 | 2463.170092 | 2219.266396 | -0.433670244 | 3.372085618 | 3.081881327  |
| <b>B7L756</b> | TY-2482_chromosome | + | 3086698 | 3087972 | 2071.190317 | 1643.554996 | 1659.83598  | 3569.570391 | 4118.532592 | 3795.758317 | -1.065538035 | 9.45610941  | 8.964120878  |
| <b>B7L747</b> | TY-2482_chromosome | + | 3087983 | 3088459 | 908.6458899 | 890.469967  | 936.6477964 | 992.7245134 | 966.5013529 | 862.1946225 | -0.037767762 | 0.163170309 | 0.131226476  |
| <b>B7L758</b> | TY-2482_chromosome | - | 3088504 | 3089310 | 391.3929834 | 377.4552182 | 348.034931  | 470.0078797 | 578.7634298 | 548.458955  | -0.522922503 | 4.327323198 | 3.99696336   |
| <b>Q1R4V7</b> | TY-2482_chromosome | + | 3089324 | 3089596 | 14432.57286 | 12885.80706 | 13243.92219 | 14258.41853 | 15345.22014 | 15541.31409 | -0.133661212 | 0.186274921 | 0.150499532  |
| <b>B7L760</b> | TY-2482_chromosome | + | 3089599 | 3089832 | 29470.84467 | 25577.21737 | 30231.39475 | 33676.80216 | 35311.03518 | 35781.53681 | -0.24390665  | 0.377963559 | 0.31265215   |
| <b>B7L757</b> | TY-2482_chromosome | - | 3090052 | 3090717 | 6600.397316 | 6747.708824 | 6027.462109 | 4666.66575  | 5596.83908  | 5300.944253 | 0.295182888  | 0.528680073 | 0.448234975  |
| <b>B7L762</b> | TY-2482_chromosome | + | 3090889 | 3092106 | 2896.106033 | 2739.995753 | 2711.278307 | 4231.317139 | 4185.562852 | 4133.656931 | -0.584800017 | 2.699043551 | 2.44262115   |
| <b>B5YWD8</b> | TY-2482_chromosome | + | 3092087 | 3092542 | 1975.763746 | 1730.303252 | 1710.015917 | 3347.409131 | 3334.582901 | 3333.117236 | -0.873821767 | 6.984259949 | 6.561296727  |
| <b>B7L761</b> | TY-2482_chromosome | + | 3092652 | 3093245 | 1069.22884  | 996.3615237 | 1015.862071 | 2326.533765 | 2439.752035 | 2357.991129 | -1.197444286 | 27.06781907 | 26.33001527  |
| <b>B7L766</b> | TY-2482_chromosome | - | 3093288 | 3093926 | 1724.660008 | 1815.121503 | 1722.756985 | 357.9847722 | 319.4233996 | 322.4868254 | -1.072365208 | 117.0686647 | 115.75878    |
| <b>B7L767</b> | TY-2482_chromosome | - | 3093995 | 3094732 | 724.8136143 | 649.1594243 | 755.4383955 | 1475.283343 | 1636.472694 | 1490.033107 | -1.072365208 | 24.43933624 | 23.72962062  |
| <b>E3XS42</b> | TY-2482_chromosome | + | 3094640 | 3094819 | 139.3379986 | 119.8785892 | 126.5540829 | 275.829448  | 329.8662737 | 311.2850049 | -1.221714121 | 13.97787698 | 13.40475823  |
| <b>B7L765</b> | TY-2482_chromosome | + | 3094835 | 3095695 | 2968.323041 | 3253.847166 | 3195.230611 | 3386.534657 | 3346.296226 | 3369.962458 | -0.115525791 | 0.235856778 | 0.193200785  |
| <b>B7L769</b> | TY-2482_chromosome | + | 3095907 | 3096740 | 884.4310574 | 984.8645343 | 860.902468  | 868.3783233 | 912.5689198 | 913.4408038 | -0.02324398  | 0.020546413 | 0.01608669   |
| <b>B7L770</b> | TY-2482_chromosome | + | 3097035 | 3097649 | 723.9094633 | 836.1090849 | 807.3556026 | 1455.289907 | 1588.472424 | 1524.289404 | -0.970381174 | 18.87267769 | 18.23358773  |
| <b>B7L771</b> | TY-2482_chromosome | - | 3097652 | 3099331 | 245.0617111 | 251.7991493 | 198.9344354 | 815.4936717 | 806.7238823 | 848.1697809 | -1.872394246 | 44.31860271 | 43.42035749  |
| <b>D7XWY5</b> | TY-2482_chromosome | + | 3099246 | 3099536 | 52.14949233 | 32.34878171 | 30.83467124 | 57.94072061 | 57.98920655 | 53.57437704 | -0.517181342 | 1.441770035 | 1.268892026  |
| <b>B7L768</b> | TY-2482_chromosome | + | 3099589 | 3100209 | 5503.492532 | 5401.446489 | 5683.596057 | 6531.384572 | 6995.926812 | 6759.755134 | -0.277707969 | 0.472035428 | 0.393271572  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L773</b> | TY-2482_chromosome | + | 3100267 | 3100539 | 3689.184849 | 3248.601199 | 3575.953712 | 5094.67556  | 5620.851115 | 5615.910207 | -0.600558302 | 1.546003967 | 1.364661199 |
| <b>B7L774</b> | TY-2482_chromosome | + | 3100561 | 3102666 | 8967.774397 | 7360.003025 | 7692.493645 | 13085.41056 | 14411.06071 | 13131.7235  | -0.728129033 | 1.635441383 | 1.445696525 |
| <b>B7L775</b> | TY-2482_chromosome | + | 3102676 | 3103362 | 1824.439434 | 1531.400015 | 1544.800214 | 1562.624692 | 1623.355416 | 1447.001969 | 0.099690814  | 0.33813845  | 0.280102673 |
| <b>B7L772</b> | TY-2482_chromosome | + | 3103371 | 3105449 | 4184.279512 | 3311.179044 | 3556.124395 | 1913.109708 | 1872.314006 | 1779.999004 | 1.026314514  | 8.216213466 | 7.754979681 |
| <b>B7L777</b> | TY-2482_chromosome | - | 3105621 | 3106823 | 2206.983718 | 2025.049187 | 2145.029225 | 1505.409721 | 1759.109765 | 1897.39812  | 0.332813977  | 2.091547579 | 1.870828334 |
| <b>B7L778</b> | TY-2482_chromosome | + | 3107103 | 3108491 | 441.1404583 | 564.2353035 | 454.3464717 | 680.9571531 | 903.8247956 | 958.3904653 | -0.863051352 | 8.615791733 | 8.143859243 |
| <b>B7L776</b> | TY-2482_chromosome | + | 3108615 | 3110321 | 2941.649755 | 2670.104689 | 2902.1157   | 2251.039498 | 2077.068837 | 2262.007085 | 0.396406717  | 1.617128387 | 1.428862323 |
| <b>B7L780</b> | TY-2482_chromosome | - | 3110380 | 3112695 | 416.9834237 | 513.0503103 | 498.3374353 | 498.681497  | 506.0480305 | 502.6954303 | -0.106444248 | 0.312095188 | 0.257963662 |
| <b>B7L781</b> | TY-2482_chromosome | - | 3112708 | 3114087 | 158.442277  | 147.810359  | 112.8932175 | 82.87071264 | 84.31474416 | 84.70972389 | 0.696452799  | 3.933032736 | 3.617855089 |
| <b>D8CB43</b> | TY-2482_chromosome | - | 3114181 | 3114534 | 129.9590954 | 136.4729128 | 118.1591831 | 49.39516114 | 71.72244325 | 93.64719128 | 0.826867572  | 4.262917696 | 3.934971127 |
| <b>selC</b>   | TY-2482_chromosome | + | 3114380 | 3114474 | 100.2115232 | 89.70684354 | 82.2966794  | 44.22075718 | 64.12287374 | 85.39804417 | 0.50603261   | 1.505055813 | 1.326906063 |
| <b>B5YWF9</b> | TY-2482_chromosome | + | 3114696 | 3115955 | 1691.871793 | 1693.564943 | 1583.535847 | 0           | 0           | 0           | 14.77725357  | 325.0237216 | 323.0330172 |
| <b>E1U309</b> | TY-2482_chromosome | - | 3116080 | 3116774 | 438.7432435 | 468.150316  | 385.5738757 | 379.2571104 | 415.8132595 | 447.0219135 | 0.018185503  | 0.144543522 | 0.116607587 |
| <b>Q4MUS7</b> | TY-2482_chromosome | - | 3119967 | 3119960 | 3131.587179 | 2890.019199 | 2787.553199 | 0           | 0           | 0           | 15.61886201  | 325.0237216 | 323.0330172 |
| <b>D3H359</b> | TY-2482_chromosome | - | 3119936 | 3120493 | 2694.275613 | 2380.545856 | 2413.913798 | 0           | 0           | 0           | 15.39866503  | 325.0237216 | 323.0330172 |
| <b>D3H361</b> | TY-2482_chromosome | - | 3121175 | 3122185 | 962.3912463 | 1025.749158 | 957.0222235 | 0           | 0           | 0           | 14.0147571   | 295.0272509 | 293.0848512 |
| <b>C7S9T5</b> | TY-2482_chromosome | + | 3122142 | 3122813 | 2443.438032 | 2731.384193 | 2693.763853 | 0           | 0           | 0           | 15.4379647   | 325.0237216 | 323.0330172 |
| <b>Q3I3P0</b> | TY-2482_chromosome | + | 3123010 | 3123390 | 679.2368318 | 589.0431858 | 707.9768697 | 0           | 0           | 0           | 18.50862283  | 216.464561  | 214.7619216 |
| <b>D3H364</b> | TY-2482_chromosome | + | 3123387 | 3124163 | 1196.289125 | 1269.239501 | 1119.56408  | 0           | 0           | 0           | 14.28807079  | 325.0237216 | 323.0330172 |
| <b>Q7AQT7</b> | TY-2482_chromosome | - | 3124203 | 3124904 | 926.8583758 | 1020.205895 | 982.7240844 | 0           | 0           | 0           | 14.00974978  | 291.8097536 | 289.882331  |
| <b>C8UQP4</b> | TY-2482_chromosome | - | 3124954 | 3125352 | 500.8996711 | 512.1200857 | 542.8873673 | 0           | 0           | 0.54619878  | 11.34860278  | 191.1936757 | 189.5745824 |
| <b>C8UQP5</b> | TY-2482_chromosome | - | 3125505 | 3125831 | 1955.658338 | 2104.328179 | 2077.467084 | 3.096725657 | 0.5527387   | 6.40889091  | 9.258354083  | 325.0237216 | 323.0330172 |
| <b>C8UQP5</b> | TY-2482_chromosome | + | 3125826 | 3126080 | 1446.96787  | 1699.645265 | 1427.028461 | 0.669830801 | 0.266749876 | 6.911635009 | 9.218084546  | 325.0237216 | 323.0330172 |
| <b>C8UQP4</b> | TY-2482_chromosome | + | 3126233 | 3126631 | 504.2751217 | 584.2933445 | 511.7010214 | 0           | 0           | 0           | 13.1124343   | 187.2968436 | 185.6954791 |
| <b>Q7AQT7</b> | TY-2482_chromosome | + | 3126681 | 3127382 | 947.1411541 | 962.6540043 | 759.3464366 | 0           | 0           | 0           | 13.84746487  | 247.4180629 | 245.6593076 |
| <b>E3PYS5</b> | TY-2482_chromosome | + | 3128042 | 3128989 | 887.68073   | 541.2451899 | 791.3508595 | 0           | 0           | 0           | 13.7402981   | 179.8809703 | 178.299967  |
| <b>C8UQP1</b> | TY-2482_chromosome | + | 3129300 | 3130112 | 24604.72151 | 27162.50662 | 24686.09734 | 0           | 0           | 0           | 18.7032205   | 107.317246  | 106.0583042 |
| <b>A8SPZ5</b> | TY-2482_chromosome | + | 3130176 | 3131105 | 17823.47259 | 17710.72978 | 17440.56868 | 0           | 0           | 0           | 18.20221028  | 110.5737157 | 109.2970451 |
| <b>Q7AQT7</b> | TY-2482_chromosome | - | 3131879 | 3132580 | 1089.188478 | 1217.615842 | 1037.697995 | 0           | 0           | 0           | 14.1745284   | 308.1366294 | 306.1707486 |
| <b>D3H369</b> | TY-2482_chromosome | - | 3132630 | 3133931 | 1195.733838 | 1047.695229 | 1084.883253 | 0           | 0           | 0           | 14.23327578  | 315.0237216 | 313.0330172 |
| <b>Q935L3</b> | TY-2482_chromosome | - | 3135290 | 3136981 | 162.9477624 | 103.8194163 | 135.1200907 | 0           | 0           | 0           | 11.24832798  | 59.40979105 | 58.40082533 |
| <b>C8UQM8</b> | TY-2482_chromosome | + | 3138202 | 3138633 | 276.9112056 | 300.549056  | 327.197176  | 0           | 0           | 0           | 12.34027156  | 121.4313538 | 120.0929147 |
| <b>P11901</b> | TY-2482_chromosome | - | 3139007 | 3140116 | 513.6851497 | 542.2271802 | 493.0495246 | 0.331105301 | 0           | 1.098541922 | 10.03674215  | 188.6151026 | 187.0102497 |
| <b>D3H379</b> | TY-2482_chromosome | - | 3140579 | 3140911 | 149.8773161 | 142.9890676 | 176.2040054 | 0           | 0           | 0           | 11.42722893  | 72.07240842 | 70.97510673 |
| <b>E5FD82</b> | TY-2482_chromosome | + | 3140964 | 3141227 | 1563.036941 | 1562.753401 | 1220.600596 | 0           | 0           | 0           | 14.55123104  | 325.0237216 | 323.0330172 |
| <b>D3H381</b> | TY-2482_chromosome | - | 3141265 | 3141912 | 19378.50895 | 17612.65928 | 17630.31736 | 0           | 0           | 0           | 18.25981046  | 110.0084205 | 108.7350276 |
| <b>D3H382</b> | TY-2482_chromosome | + | 3142018 | 3143214 | 1244.386035 | 1059.542502 | 1113.620338 | 0           | 0           | 0           | 14.27727702  | 314.9121472 | 312.9298759 |
| <b>Q6SJ76</b> | TY-2482_chromosome | - | 3143252 | 3144160 | 363.2997917 | 274.1891353 | 331.8183705 | 0           | 0           | 0           | 12.49447897  | 122.666194  | 121.320102  |
| <b>D3H369</b> | TY-2482_chromosome | - | 3144097 | 3144837 | 712.9662714 | 635.4091092 | 623.833513  | 0           | 0           | 0           | 13.46684805  | 220.1471272 | 218.4356244 |
| <b>Q0TDJ8</b> | TY-2482_chromosome | - | 3147419 | 3147708 | 283.5505048 | 312.0620952 | 351.4816665 | 0           | 0           | 0           | 12.41186283  | 123.1433305 | 121.7933607 |
| <b>C8TTS1</b> | TY-2482_chromosome | + | 3148481 | 3149235 | 138.8885383 | 113.7309682 | 108.2222494 | 2.462060119 | 10.51640447 | 8.601897258 | 4.088211647  | 52.07835739 | 51.12359258 |
| <b>E9Y2X6</b> | TY-2482_chromosome | + | 3149872 | 3150217 | 333.7087363 | 365.9619088 | 374.7905334 | 0           | 0           | 0           | 12.57533319  | 139.38679   | 137.960357  |
| <b>C8TWJ4</b> | TY-2482_chromosome | + | 3151826 | 3152695 | 585.30964   | 630.7979978 | 576.3339092 | 0           | 0           | 0           | 13.2930973   | 208.6114877 | 206.9344024 |
| <b>C8TNL5</b> | TY-2482_chromosome | + | 3153931 | 3156885 | 1436.818177 | 1417.461285 | 1435.310484 | 2.790271927 | 1.075449966 | 0.651501987 | 9.792911597  | 325.0237216 | 323.0330172 |
| <b>B3Y1R9</b> | TY-2482_chromosome | + | 3156923 | 3157114 | 131.9370769 | 160.0968522 | 124.0049857 | 0           | 0           | 0           | 11.1425045   | 61.94980949 | 60.92270776 |
| <b>C8TWJ8</b> | TY-2482_chromosome | + | 3157272 | 3158087 | 115.4466303 | 124.9437666 | 108.0561741 | 8.771726815 | 9.37021822  | 7.553359397 | 3.704545307  | 47.95637932 | 47.033351   |
| <b>Q1RA72</b> | TY-2482_chromosome | - | 3158212 | 3158259 | 88.60447485 | 109.1486103 | 111.7290394 | 0           | 0           | 0           | 10.76856911  | 49.33864211 | 48.4075234  |
| <b>Q5K5L6</b> | TY-2482_chromosome | - | 3158426 | 3159382 | 195.577435  | 171.4305527 | 134.4894116 | 25.98002925 | 34.77387546 | 43.85806557 | 2.247364791  | 25.53588664 | 24.8144204  |
| <b>D3GX48</b> | TY-2482_chromosome | + | 3159733 | 3160215 | 257.3349739 | 320.7006543 | 258.9563011 | 23.80442483 | 35.02950007 | 31.93726258 | 3.139198665  | 62.35782842 | 61.32607182 |
| <b>B7MN77</b> | TY-2482_chromosome | + | 3160151 | 3160639 | 89.48550661 | 105.300331  | 79.51929206 | 18.19379897 | 11.12744858 | 20.96588023 | 2.379043269  | 20.85935404 | 20.19690929 |
| <b>B7LBT9</b> | TY-2482_chromosome | + | 3160639 | 3161124 | 95.56407574 | 73.27969571 | 96.00660026 | 46.78834021 | 49.49561505 | 51.24805571 | 0.91231813   | 4.32418561  | 3.994197918 |
| <b>B7MSL6</b> | TY-2482_chromosome | + | 3161429 | 3162271 | 80.28504467 | 59.63611209 | 60.74663928 | 13.89487764 | 19.93708334 | 21.67131531 | 1.890105772  | 11.74609996 | 11.20889377 |
| <b>B7L779</b> | TY-2482_chromosome | + | 3163067 | 3164248 | 19.09206884 | 10.47536543 | 17.18425939 | 21.81632363 | 33.8307579  | 39.13669022 | -0.898326674 | 2.40255084  | 2.162460699 |
| <b>B7L784</b> | TY-2482_chromosome | + | 3164362 | 3165282 | 967.0778465 | 919.2134484 | 992.6442479 | 774.168767  | 737.4032506 | 776.2730843 | 0.351734873  | 3.007397514 | 2.735634198 |
| <b>B7L785</b> | TY-2482_chromosome | - | 3165292 | 3166107 | 804.7792955 | 796.609207  | 874.7026787 | 614.1374973 | 606.2824265 | 599.7620774 | 0.461844688  | 4.724628383 | 4.374074023 |

|               |                    |   |         |         |             |             |              |             |             |             |              |             |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|--------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7L783</b> | TY-2482_chromosome | + | 3166329 | 3166619 | 78.06771805 | 104.6873874 | 58.4331695   | 54.67203342 | 87.61367328 | 87.71900096 | -0.057159432 | 0.061848591 | 0.049047034  |
| <b>B7L787</b> | TY-2482_chromosome | - | 3166666 | 3168012 | 373.8457369 | 392.1964185 | 352.2907088  | 755.5592797 | 942.0670341 | 932.6361276 | -1.253604599 | 22.98018426 | 22.28923064  |
| <b>D3H2G2</b> | TY-2482_chromosome | - | 3168061 | 3168537 | 529.2297719 | 463.4892805 | 455.7581665  | 512.0016769 | 531.9750689 | 561.9332694 | -0.133883172 | 0.650530989 | 0.549622462  |
| <b>B7L788</b> | TY-2482_chromosome | - | 3168566 | 3169897 | 27.24583151 | 58.35182773 | 36.1421425   | 21.99272076 | 28.871551   | 20.67913016 | 0.596205235  | 1.716806256 | 1.521231855  |
| <b>B7L789</b> | TY-2482_chromosome | + | 3170072 | 3171835 | 60.42819388 | 535.8059854 | 574.7106919  | 717.6882526 | 701.7044115 | 768.6749145 | -0.322863312 | 2.732606623 | 2.474138258  |
| <b>B7L790</b> | TY-2482_chromosome | - | 3171886 | 3173274 | 164.4175526 | 141.1424811 | 141.0374363  | 1399.367573 | 1402.785003 | 1629.456119 | -3.304593334 | 132.8818446 | 131.4846001  |
| <b>B7L809</b> | TY-2482_chromosome | - | 3173415 | 3174731 | 250.5001587 | 241.7981284 | 274.1141621  | 95.03298148 | 128.2544611 | 98.97768736 | 1.274886134  | 14.21341701 | 13.63604525  |
| <b>B7L808</b> | TY-2482_chromosome | - | 3174744 | 3176243 | 315.0813238 | 295.858866  | 296.1036383  | 296.667031  | 358.5914472 | 316.0942597 | -0.091204504 | 0.320271867 | 0.264560728  |
| <b>B7L811</b> | TY-2482_chromosome | - | 3176246 | 3176833 | 199.4347047 | 165.7824383 | 185.3524868  | 172.2223857 | 258.1874311 | 279.1256684 | -0.313839996 | 1.356054109 | 1.190151666  |
| <b>B7L812</b> | TY-2482_chromosome | - | 3176911 | 3177198 | 155.737351  | 132.3446809 | 152.1930356  | 115.2982781 | 122.4578524 | 106.3699523 | 0.391660603  | 1.476949143 | 1.301379559  |
| <b>B7L813</b> | TY-2482_chromosome | - | 3177205 | 3178890 | 755.5600244 | 608.4514281 | 812.6281973  | 820.7150914 | 774.4378326 | 627.9064065 | 0.034447254  | 0.055519945 | 0.044118586  |
| <b>B7L810</b> | TY-2482_chromosome | + | 3178874 | 3179368 | 969.3700569 | 991.7590402 | 604.849575   | 650.4656102 | 655.0781164 | 516.0537487 | 0.394422632  | 2.966955176 | 2.697139372  |
| <b>E1JD58</b> | TY-2482_chromosome | + | 3179518 | 3179874 | 5002.575071 | 4712.572004 | 4755.686709  | 2841.685635 | 3002.511332 | 2847.774478 | 0.743624619  | 3.951644349 | 3.635927094  |
| <b>E1HWK4</b> | TY-2482_chromosome | + | 3179789 | 3180124 | 70.53330207 | 64.28006568 | 44.280062633 | 55.86981432 | 57.19476158 | 52.6796834  | 0.058569057  | 0.161802409 | 0.1301394    |
| <b>B7L816</b> | TY-2482_chromosome | + | 3180167 | 3181348 | 388.5700948 | 354.8760916 | 429.1486083  | 949.0781346 | 1101.049853 | 1045.106114 | -1.353596603 | 31.9980295  | 31.20392929  |
| <b>B7L817</b> | TY-2482_chromosome | - | 3181362 | 3181856 | 737.3423184 | 657.5814669 | 643.9549117  | 490.5699146 | 410.8975597 | 384.2094031 | 0.666392117  | 7.463732813 | 7.023136811  |
| <b>B7L819</b> | TY-2482_chromosome | - | 3181856 | 3182215 | 180.415055  | 200.6696345 | 159.9872821  | 187.3584299 | 201.7070449 | 184.832387  | -0.140636347 | 0.262954932 | 0.216539625  |
| <b>B7L820</b> | TY-2482_chromosome | - | 3182208 | 3182552 | 241.8098247 | 241.9939671 | 201.7004071  | 244.0186425 | 255.2137682 | 248.0759993 | -0.157732586 | 0.439637292 | 0.366675166  |
| <b>B7L818</b> | TY-2482_chromosome | + | 3182661 | 3183107 | 187.1793062 | 199.1373929 | 195.3871949  | 229.7631427 | 244.9850941 | 262.3194409 | -0.348165733 | 1.655444601 | 1.464215896  |
| <b>B7L822</b> | TY-2482_chromosome | - | 3183160 | 3184650 | 212.6706008 | 205.5100928 | 192.7970112  | 181.7285578 | 180.5942698 | 198.2769699 | 0.118719083  | 0.371040662 | 0.306739241  |
| <b>B7L823</b> | TY-2482_chromosome | - | 3184650 | 3186362 | 64.21535577 | 66.31583843 | 38.38655656  | 40.59357093 | 48.61954319 | 45.10349778 | 0.243097463  | 0.635432952 | 0.536604751  |
| <b>B7L821</b> | TY-2482_chromosome | + | 3186499 | 3187419 | 67.73075526 | 66.23641396 | 64.47641745  | 24.93119991 | 34.21237735 | 37.44423926 | 0.376504171  | 3.448328333 | 3.165507863  |
| <b>C6UYS2</b> | TY-2482_chromosome | - | 3187422 | 3187643 | 21.6662047  | 29.92134592 | 25.83293865  | 28.99540252 | 27.76659457 | 23.95668364 | -0.124305158 | 0.049100984 | 0.038711932  |
| <b>C8TLC9</b> | TY-2482_chromosome | - | 3187598 | 3188233 | 105.3415683 | 91.98847778 | 99.17657281  | 78.24965907 | 82.60738107 | 87.25244007 | 0.284673392  | 0.769738751 | 0.656360519  |
| <b>B7L827</b> | TY-2482_chromosome | - | 3188236 | 3190110 | 104.9892573 | 90.52806999 | 85.16650944  | 80.20714168 | 82.87249067 | 92.96065339 | 0.141359044  | 0.28503708  | 0.235122515  |
| <b>B7L828</b> | TY-2482_chromosome | + | 3190145 | 3190858 | 37.65871803 | 36.05734995 | 44.21216348  | 72.76657799 | 71.41024126 | 82.36801575 | -0.904026421 | 3.996732891 | 3.679031317  |
| <b>B7L824</b> | TY-2482_chromosome | - | 3190861 | 3192519 | 1802.149206 | 1689.798394 | 1633.822035  | 1687.303919 | 1445.599499 | 1746.66339  | 0.074342431  | 0.280322071 | 0.230992677  |
| <b>D3H311</b> | TY-2482_chromosome | - | 3192719 | 3193150 | 48.29422997 | 51.11603121 | 33.76871926  | 69.51247687 | 94.97311866 | 92.92978186 | -1.014336814 | 4.069445941 | 3.747565807  |
| <b>D3H312</b> | TY-2482_chromosome | - | 3193259 | 3193675 | 171.9931779 | 157.4483325 | 159.6129512  | 202.2218892 | 260.9134468 | 233.4000919 | -0.495780103 | 2.782423298 | 2.521899285  |
| <b>B7L832</b> | TY-2482_chromosome | + | 3193975 | 3194304 | 775.987928  | 934.3131791 | 854.8836411  | 882.3687697 | 846.1834353 | 856.2277375 | -0.051072021 | 0.064938058 | 0.051329345  |
| <b>B7L833</b> | TY-2482_chromosome | - | 3194312 | 3195523 | 2308.085881 | 2284.533608 | 2377.704349  | 1993.529765 | 1914.861032 | 2040.141881 | 0.248876917  | 1.550639501 | 1.3566635807 |
| <b>B7L829</b> | TY-2482_chromosome | + | 3195624 | 3196685 | 115.7424    | 105.4443763 | 140.1660988  | 64.12895705 | 63.62982207 | 66.85910012 | 0.950453037  | 5.641597176 | 5.253590966  |
| <b>B7L834</b> | TY-2482_chromosome | - | 3196688 | 3197977 | 115.1871138 | 68.7050499  | 136.9115421  | 119.7076745 | 135.4714744 | 125.5800724 | -0.096313785 | 0.538777464 | 0.450523912  |
| <b>B7L836</b> | TY-2482_chromosome | - | 3198100 | 3199245 | 145.5869838 | 189.6770126 | 176.5625465  | 114.9317893 | 108.7946179 | 117.5336619 | 0.542268394  | 3.04720342  | 2.77348382   |
| <b>B7L835</b> | TY-2482_chromosome | - | 3199245 | 3199859 | 118.8220387 | 118.0902932 | 126.2882703  | 91.64178239 | 85.72179916 | 101.7435177 | 0.395615183  | 1.470020301 | 1.295232057  |
| <b>B7L838</b> | TY-2482_chromosome | - | 3199846 | 3200721 | 255.5043494 | 276.4248823 | 268.6635481  | 279.6144889 | 258.6753597 | 259.4655298 | -0.011840008 | 0           | 0            |
| <b>B7L837</b> | TY-2482_chromosome | - | 3200721 | 3201407 | 413.1935754 | 413.5686482 | 467.9961914  | 497.5972649 | 416.2242284 | 415.7632539 | -0.020928173 | 0.098562031 | 0.078070766  |
| <b>B7L840</b> | TY-2482_chromosome | + | 3201685 | 3202338 | 592.9824063 | 521.0871156 | 586.060476   | 525.5304034 | 568.285844  | 673.9505232 | -0.012406315 | 0.159246369 | 0.128237912  |
| <b>B7L841</b> | TY-2482_chromosome | - | 3202390 | 3203199 | 3889.350969 | 3575.832045 | 3980.990591  | 3570.446215 | 3195.320924 | 3383.309596 | 0.201516587  | 0.439973816 | 0.366805815  |
| <b>C3SLN7</b> | TY-2482_chromosome | - | 3203317 | 3203721 | 261.4092415 | 212.4852145 | 269.7541348  | 144.9562921 | 177.6564702 | 161.5547354 | 0.683364452  | 4.285510151 | 3.956636988  |
| <b>B7L843</b> | TY-2482_chromosome | - | 3203955 | 3206366 | 9776.734248 | 10216.21642 | 10384.58877  | 13382.9714  | 12700.7514  | 11748.03197 | -0.322844885 | 0.466286446 | 0.388660456  |
| <b>B7L842</b> | TY-2482_chromosome | - | 3206398 | 3207468 | 895.5888751 | 889.4179691 | 892.2465092  | 1297.783588 | 1332.593667 | 1157.758393 | -0.503747267 | 5.840652253 | 5.447298839  |
| <b>B7L845</b> | TY-2482_chromosome | - | 3207471 | 3208568 | 3058.26033  | 2609.498067 | 2738.562785  | 4290.396146 | 4660.01497  | 3735.229176 | 0.572258855  | 2.35644639  | 2.355442749  |
| <b>B7L846</b> | TY-2482_chromosome | - | 3208576 | 3209976 | 2638.357308 | 2729.066029 | 2975.139834  | 10078.3725  | 11258.67543 | 9810.824616 | -1.889049243 | 8.495905644 | 8.027568753  |
| <b>B5YX5</b>  | TY-2482_chromosome | - | 3210273 | 3210470 | 1337.186725 | 1426.090125 | 990.958765   | 956.4671233 | 1388.85345  | 1375.823737 | -0.05321031  | 0.017979818 | 0.013783703  |
| <b>B7L844</b> | TY-2482_chromosome | + | 3210740 | 3211096 | 3691.119184 | 2574.615658 | 2781.945464  | 11140.38912 | 13539.1996  | 13049.29275 | -2.001262064 | 8.962691844 | 8.481901211  |
| <b>B7L848</b> | TY-2482_chromosome | + | 3211063 | 3211317 | 1729.677831 | 1381.099811 | 1282.225083  | 4990.281827 | 6714.224118 | 6082.24089  | -1.998421554 | 20.65752562 | 19.99061519  |
| <b>B7L849</b> | TY-2482_chromosome | + | 3211323 | 3212966 | 9032.480526 | 6994.45847  | 7339.152652  | 14187.65244 | 17227.92804 | 14459.31506 | -0.935963536 | 2.357929477 | 2.120879408  |
| <b>B7L851</b> | TY-2482_chromosome | + | 3213075 | 3214436 | 1674.185081 | 1667.434079 | 1702.497141  | 1877.298842 | 1804.727345 | 1705.355194 | -0.093940876 | 0.41869373  | 0.347989818  |
| <b>B7L853</b> | TY-2482_chromosome | + | 3214977 | 3216389 | 498.5950141 | 697.7281032 | 616.27516    | 1206.565561 | 1114.929166 | 799.1596976 | -0.861426172 | 7.525677681 | 7.082916817  |
| <b>B7L854</b> | TY-2482_chromosome | + | 3216483 | 3217727 | 78.23117788 | 71.05078506 | 90.07963477  | 102.4898843 | 116.9778478 | 110.4701036 | -0.413753699 | 1.687184543 | 1.493788426  |
| <b>B7L855</b> | TY-2482_chromosome | + | 3217863 | 3219035 | 215.1881905 | 175.1727324 | 167.1572928  | 300.7402174 | 323.8960854 | 287.8329273 | -0.697946812 | 5.601523815 | 5.215849677  |
| <b>B7L852</b> | TY-2482_chromosome | + | 3219013 | 3219969 | 639.4329873 | 535.9980567 | 509.0998461  | 575.8702028 | 528.6450515 | 592.7667926 | 0.00195412   | 0.019100982 | 0.014729147  |
| <b>B7L857</b> | TY-2482_chromosome | + | 3220117 | 3220875 | 3526.405053 | 3119.09878  | 3105.040671  | 5537.110585 | 4797.494101 | 5702.230932 | -0.702515527 | 2.154080521 | 1.929584779  |
| <b>B7L858</b> | TY-2482_chromosome | + | 3220900 | 3221463 | 3022.183227 | 2269.179151 | 2705.326617  | 5860.175551 | 5571.712915 | 5881.470234 | -1.051857353 | 4.783610012 | 4.430905191  |



|        |                    |   |         |         |             |              |             |              |             |              |              |              |             |
|--------|--------------------|---|---------|---------|-------------|--------------|-------------|--------------|-------------|--------------|--------------|--------------|-------------|
| B7L859 | TY-2482_chromosome | - | 3221523 | 3222857 | 1943.173316 | 1648.054358  | 1681.234497 | 2262.4348    | 2671.50571  | 2729.087162  | -0.511202665 | 5.228973988  | 4.857649406 |
| B7L856 | TY-2482_chromosome | + | 3223024 | 3223686 | 681.0308784 | 724.5689096  | 629.6732813 | 389.6916112  | 465.0945322 | 496.8922343  | 0.563706283  | 5.85988688   | 5.465887353 |
| B7L861 | TY-2482_chromosome | + | 3223756 | 3224226 | 55.09929705 | 51.28278238  | 51.82267788 | 71.31903939  | 82.51139351 | 98.46389126  | -0.656818537 | 2.49645281   | 2.250424808 |
| B7L862 | TY-2482_chromosome | + | 3224278 | 3224862 | 275.2245821 | 314.277537   | 303.0840941 | 280.2670037  | 300.2278351 | 343.6512928  | -0.065259414 | 0.15968278   | 0.128393921 |
| B7L863 | TY-2482_chromosome | - | 3224930 | 3225649 | 166.237807  | 164.556331   | 199.1752084 | 243.2327696  | 215.9967011 | 241.3952208  | -0.367065745 | 1.936020088  | 1.72643721  |
| B7L864 | TY-2482_chromosome | - | 3225667 | 3226860 | 102.6905995 | 110.3727751  | 109.1469848 | 181.7376251  | 168.8196261 | 175.8323535  | -0.719541131 | 4.413360845  | 4.077191588 |
| B7L860 | TY-2482_chromosome | - | 3226863 | 3228476 | 37.01512536 | 33.72909979  | 30.47543241 | 102.9742766  | 94.74285615 | 88.42505671  | -1.51200093  | 9.328254645  | 8.838421425 |
| B7L866 | TY-2482_chromosome | - | 3228565 | 3229956 | 46.85249023 | 33.81457644  | 47.18552548 | 41.6416721   | 48.72457736 | 66.15806907  | -0.202028478 | 0.527211778  | 0.440978946 |
| B7L867 | TY-2482_chromosome | - | 3229978 | 3231852 | 90.5762328  | 75.74832249  | 81.99296439 | 118.2334469  | 118.9681008 | 158.09322    | -0.63072594  | 3.071301931  | 2.796600874 |
| B7L870 | TY-2482_chromosome | - | 3233111 | 3233833 | 1683.359676 | 1459.501197  | 1558.919049 | 509.0556801  | 482.1053144 | 547.7751096  | 1.642061041  | 5.70770617   | 5.180358319 |
| B7L868 | TY-2482_chromosome | - | 3233851 | 3234621 | 1204.167438 | 1172.141839  | 1112.28488  | 358.5215113  | 351.2631532 | 328.359366   | 1.73845909   | 62.40625661  | 61.37356303 |
| B7L872 | TY-2482_chromosome | - | 3234715 | 3235602 | 420.3066767 | 398.3217479  | 329.6995947 | 195.7500822  | 179.1865635 | 157.2215343  | 1.07436176   | 13.65366392  | 13.08572311 |
| B7L873 | TY-2482_chromosome | - | 3235605 | 3236561 | 400.0391252 | 284.6598949  | 305.0037288 | 201.0843117  | 195.3335401 | 204.4867075  | 0.769171092  | 6.05252379   | 5.65440975  |
| B7L874 | TY-2482_chromosome | - | 3236651 | 3237688 | 738.7050801 | 671.16613212 | 569.648575  | 181.7419976  | 196.2347222 | 219.7072677  | 1.175665315  | 37.27542005  | 36.42717873 |
| B7L871 | TY-2482_chromosome | - | 3237939 | 3239009 | 140.4060667 | 126.2186331  | 95.69583003 | 140.9376282  | 161.6523151 | 170.7716652  | -0.413344624 | 1.447902816  | 1.274283951 |
| B7L876 | TY-2482_chromosome | - | 3239023 | 3241542 | 509.4539219 | 627.8700425  | 557.5391446 | 428.7932357  | 460.640687  | 501.3608681  | 0.242476633  | 1.596035548  | 1.409644332 |
| B7L877 | TY-2482_chromosome | - | 3241570 | 3242298 | 57.75286137 | 42.96891264  | 46.23791683 | 30.36421954  | 54.56148277 | 35.37499844  | 0.327123259  | 0.537619413  | 0.449579011 |
| B7L875 | TY-2482_chromosome | - | 3242349 | 3242918 | 288.104313  | 310.5773296  | 315.9366706 | 170.0649721  | 191.3375308 | 208.6264877  | 0.682884557  | 5.932706714  | 5.537844207 |
| B7L879 | TY-2482_chromosome | - | 3243223 | 3245049 | 27175.1873  | 23325.94827  | 25323.83344 | 16105.41174  | 15658.63851 | 14499.33462  | 0.741349607  | 1.358323995  | 1.192166534 |
| B7L878 | TY-2482_chromosome | - | 3245214 | 3246581 | 15833.89247 | 14015.68592  | 16218.98888 | 20148.77926  | 20927.36667 | 19834.02449  | -0.363174347 | 0.606701263  | 0.512112236 |
| A1AHR3 | TY-2482_chromosome | + | 3246827 | 3247372 | 35353.89806 | 30802.70551  | 32425.66978 | 11599.43571  | 11344.94208 | 11092.27832  | 1.557810107  | 4.695646054  | 4.347037462 |
| B7L882 | TY-2482_chromosome | - | 3247375 | 3248754 | 89942.58962 | 79044.99807  | 81400.98869 | 26258.44076  | 25783.2661  | 25656.57563  | 1.07668404   | 5.047714658  | 4.683692723 |
| B7L880 | TY-2482_chromosome | - | 3248784 | 3249644 | 46003.03659 | 40301.52315  | 40495.93144 | 12817.17505  | 12879.13662 | 12389.16568  | 1.750164567  | 5.628729242  | 5.241360295 |
| B7L884 | TY-2482_chromosome | - | 3249698 | 3251236 | 95759.49859 | 79530.00796  | 85412.30022 | 28355.09992  | 27453.3742  | 26198.24044  | 1.699821239  | 4.907385721  | 4.549158462 |
| Q1R4J7 | TY-2482_chromosome | + | 3251423 | 3252157 | 53007.68638 | 39556.09771  | 44297.45327 | 17795.46484  | 17729.37074 | 17172.09488  | 1.428338735  | 3.68926439   | 3.385441494 |
| B7L883 | TY-2482_chromosome | - | 3252332 | 3252568 | 18858.06889 | 16063.99051  | 16159.2048  | 7080.32789   | 7277.055847 | 1.291362923  | 3.709147718  | 3.463570095  |             |
| B7L888 | TY-2482_chromosome | - | 3252618 | 3253430 | 14079.65856 | 11621.75736  | 12850.15229 | 10607.43176  | 11426.611   | 10993.42998  | 0.263634383  | 0.294607114  | 0.243421966 |
| B7L887 | TY-2482_chromosome | - | 3253442 | 3253819 | 2413.53693  | 2356.097692  | 2330.491576 | 4501.107825  | 5034.935458 | 5384.21068   | -1.064767042 | 7.45078442   | 7.010907648 |
| B7L890 | TY-2482_chromosome | - | 3254439 | 3255059 | 767.0334707 | 713.8176455  | 762.8428829 | 1079.845052  | 1203.041919 | 1087.176387  | -0.567205446 | 7.40640291   | 6.96843828  |
| B7L889 | TY-2482_chromosome | - | 3255126 | 3257012 | 3361.07181  | 3403.77386   | 3074.958204 | 6707.929344  | 7494.933092 | 6115.528896  | -1.070903627 | 3.348846469  | 3.059489913 |
| B7L892 | TY-2482_chromosome | - | 3257394 | 3257834 | 1143.187907 | 1313.51596   | 1242.763837 | 3449.395379  | 4265.769306 | 4252.479786  | -1.714389015 | 21.35416147  | 20.68729535 |
| B7L893 | TY-2482_chromosome | - | 3257927 | 3258382 | 347.125134  | 464.3403211  | 389.4969178 | 307.6414221  | 367.9257988 | 365.829532   | 0.141213659  | 0.763844058  | 0.651143    |
| B7L891 | TY-2482_chromosome | + | 3258534 | 3259523 | 1651.261244 | 1509.477519  | 1699.43785  | 2544.6112255 | 2793.612466 | 2674.788782  | -0.688189833 | 9.780410064  | 9.279967181 |
| B7L895 | TY-2482_chromosome | - | 3259534 | 3260982 | 4843.345536 | 4716.729946  | 4548.893318 | 7984.377005  | 6651.426407 | 7244.95839   | -0.639523048 | 1.426658159  | 1.255239569 |
| B7L896 | TY-2482_chromosome | - | 3260979 | 3262472 | 9982.854817 | 9507.882535  | 10286.83468 | 7693.422043  | 6213.961742 | 7344.682049  | 0.506430189  | 0.880851754  | 0.755605502 |
| B7L897 | TY-2482_chromosome | + | 3262695 | 3264560 | 940.9654523 | 869.8542998  | 949.5559933 | 1130.294495  | 1050.371459 | 908.4821541  | -0.144976781 | 0.823833528  | 0.704770731 |
| B7L894 | TY-2482_chromosome | + | 3264730 | 3265146 | 416.6873479 | 525.5625219  | 421.3325752 | 1719.981052  | 1408.136066 | 1393.982328  | -1.807829614 | 43.20463037  | 42.31456677 |
| B7L899 | TY-2482_chromosome | + | 3265157 | 3266659 | 311.8146606 | 319.3432841  | 267.7550513 | 1204.106155  | 865.9803161 | 927.6395453  | -1.781011748 | 36.21409218  | 35.3749559  |
| B7L8A0 | TY-2482_chromosome | + | 3266667 | 3267629 | 1761.390785 | 1752.361176  | 1421.640334 | 1644.506191  | 1587.671632 | 1589.587172  | -0.005840148 | 0.101600279  | 0.080384879 |
| B7L8A1 | TY-2482_chromosome | + | 3267657 | 3268544 | 5877.394128 | 6027.386144  | 5989.742831 | 8654.724904  | 8543.376772 | 7822.847289  | -0.491341793 | 0.911288239  | 0.783089367 |
| B5YY10 | TY-2482_chromosome | + | 3268658 | 3269599 | 1581.398531 | 1486.082671  | 1604.709451 | 2528.107048  | 2155.480094 | 2215.545379  | -0.545113568 | 6.103689253  | 5.703393921 |
| B7L8A3 | TY-2482_chromosome | + | 3269606 | 3270595 | 1589.522223 | 1674.391525  | 1435.7488   | 1658.539783  | 1547.644069 | 1612.24001   | -0.072445689 | 0.143003013  | 0.115438031 |
| B7L8A4 | TY-2482_chromosome | - | 3270567 | 3271991 | 3912.339777 | 4049.050084  | 3923.795706 | 2954.318056  | 2688.59554  | 3257.341079  | 0.411472225  | 1.520800665  | 1.341745649 |
| B7L898 | TY-2482_chromosome | - | 3272017 | 3272706 | 5296.127006 | 5971.455528  | 6339.904382 | 3811.35707   | 3398.303966 | 3770.224946  | 0.680470213  | 1.695595019  | 1.501655354 |
| E9WNY3 | TY-2482_chromosome | - | 3273100 | 3273333 | 271143.2639 | 1229910.007  | 534536.5759 | 1542.448039  | 502.0509461 | 321.3453302  | 9.289089193  | 35.1383391   | 34.30812088 |
| rrsD   | TY-2482_chromosome | + | 3273187 | 3274728 | 1881823.78  | 8271897.538  | 4064510.536 | 2710.364066  | 562.5222467 | 167.3564961  | 11.57725891  | 32.14662259  | 31.34980634 |
| Q57H85 | TY-2482_chromosome | + | 3274308 | 3274625 | 46015.599   | 2044162.137  | 937194.4463 | 203.0745113  | 129.3135076 | 168.13476786 | 12.71481475  | 54.44583712  | 53.48156183 |
| ileT   | TY-2482_chromosome | + | 3274797 | 3274873 | 1053.963591 | 1164.988835  | 599.4038986 | 3575.400709  | 5714.542232 | 5401.379606  | -2.50441196  | 21.75865988  | 21.08650982 |
| alaT   | TY-2482_chromosome | + | 3274916 | 3274991 | 706.9640682 | 623.601084   | 390.8697509 | 2425.09474   | 3725.41217  | 3632.659682  | -2.556720011 | 43.79670526  | 42.90325136 |
| rrIE   | TY-2482_chromosome | + | 3275175 | 3278078 | 1059986.954 | 10949555.22  | 2948890.746 | 2473.140155  | 818.3533112 | 227.2447156  | 11.32441306  | 30.28189636  | 29.50790107 |
| Q1R3T8 | TY-2482_chromosome | - | 3275401 | 3275703 | 186837.3788 | 1536827.289  | 502110.0885 | 319.5315711  | 73.82473193 | 11.76908736  | 30.25229239  | 35.247881381 |             |
| C1HUN3 | TY-2482_chromosome | - | 3276761 | 3276964 | 103413.6419 | 1293601.171  | 323697.4108 | 144.806722   | 50.94310327 | 19.08972608  | 12.21299532  | 35.16351878  | 34.33271169 |
| C1HUN1 | TY-2482_chromosome | - | 3277041 | 3277493 | 193095.0566 | 2158350.231  | 531592.3181 | 408.5223452  | 115.2540157 | 35.07516144  | 11.56997222  | 30.23214248  | 29.45918    |
| C1HUN0 | TY-2482_chromosome | - | 3277497 | 3277853 | 162423.2177 | 1650371.22   | 448620.976  | 554.3935215  | 162.3153677 | 41.87189518  | 10.81950795  | 28.16567028  | 27.41286429 |
| Q1RFY5 | TY-2482_chromosome | - | 3278057 | 3278332 | 11104.58885 | 53099.15606  | 6564.576379 | 991.9745312  | 350.1550501 | 317.51563    | 4.631270769  | 15.53590659  | 14.93558309 |

|        |                    |   |         |         |              |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| rrfC   | TY-2482_chromosome | + | 3278171 | 3278290 | 8035.058957  | 30082.89722 | 444.0502606 | 716.3197297 | 55.63515832 | 37.23766481 | 4.664142067  | 7.342964623 | 6.906428593 |
| Q8CLS5 | TY-2482_chromosome | - | 3278298 | 3278420 | 3371.602908  | 3855.718996 | 1687.341913 | 2173.80652  | 4092.120982 | 3106.583075 | -0.232597831 | 0.106517659 | 0.084570816 |
| aspT   | TY-2482_chromosome | + | 3278343 | 3278419 | 3268.87377   | 3404.300556 | 1652.746173 | 2152.630985 | 4088.789968 | 3098.762519 | -0.290626776 | 0.295090258 | 0.24361137  |
| trpT   | TY-2482_chromosome | + | 3278428 | 3278503 | 3006.797806  | 2792.51461  | 1540.535938 | 1968.509007 | 3948.770504 | 2984.655163 | -0.360460173 | 0.615421097 | 0.519206512 |
| B7L8A6 | TY-2482_chromosome | - | 3278602 | 3279438 | 964.3935818  | 1055.080584 | 1097.407811 | 1818.37957  | 1807.228717 | 1782.024677 | -0.797820624 | 13.6414247  | 13.07380548 |
| Q8D1L6 | TY-2482_chromosome | + | 3279476 | 3279892 | 2897.079846  | 2409.188063 | 2405.452554 | 1728.499287 | 1950.249301 | 2213.843292 | 0.417703065  | 2.859078584 | 2.59505346  |
| B7L8A8 | TY-2482_chromosome | - | 3279923 | 3281470 | 455.0119188  | 464.996721  | 421.2731396 | 453.346692  | 515.3666923 | 546.9478881 | -0.191658901 | 0.847143694 | 0.725901103 |
| B7L8B0 | TY-2482_chromosome | + | 3282031 | 3283674 | 1129.364489  | 1067.84065  | 1057.59817  | 4130.629159 | 4140.628281 | 4210.233726 | -1.933915822 | 29.46217714 | 28.69840101 |
| B7L8A7 | TY-2482_chromosome | + | 3283674 | 3283934 | 321.0266091  | 240.8448595 | 291.6036256 | 720.8191181 | 648.8692067 | 520.5172539 | -1.095545148 | 14.38763531 | 13.80762546 |
| B7L8B1 | TY-2482_chromosome | + | 3283957 | 3284883 | 2229.965986  | 2097.525547 | 2311.505869 | 3521.130296 | 3422.199941 | 2857.22651  | -0.544178349 | 3.02750451  | 2.754764154 |
| B7L8B3 | TY-2482_chromosome | + | 3284951 | 3286798 | 2538.670472  | 2358.522615 | 2551.527407 | 3836.448122 | 3507.022802 | 3219.793022 | -0.486993665 | 2.157258932 | 1.93232532  |
| B7L8B4 | TY-2482_chromosome | + | 3286804 | 3288345 | 2017.200657  | 2006.860635 | 2110.427473 | 3075.639837 | 2979.74512  | 2701.010224 | -0.507774842 | 2.726950715 | 2.468797741 |
| B7L8B2 | TY-2482_chromosome | - | 3288403 | 3289293 | 2375.526845  | 2868.956215 | 2834.429158 | 1328.907209 | 1163.600353 | 1188.003371 | 1.107211071  | 21.51906052 | 20.85057541 |
| B7L8B5 | TY-2482_chromosome | + | 3289443 | 3290915 | 41001.02993  | 41438.19525 | 42637.76034 | 24922.84423 | 23792.39937 | 25561.0863  | 0.757396452  | 1.407140565 | 1.237268427 |
| E9WNG1 | TY-2482_chromosome | - | 3291008 | 3291330 | 1643.112613  | 1605.964827 | 1576.231669 | 1314.105344 | 1456.462731 | 1569.948817 | 0.157656657  | 0.776737234 | 0.662567628 |
| B7L8B8 | TY-2482_chromosome | - | 3291488 | 3291976 | 226.4405595  | 272.6497263 | 235.8091854 | 171.8983306 | 216.0348151 | 308.6137835 | 0.047798104  | 0.149216941 | 0.119980165 |
| B7L8B9 | TY-2482_chromosome | + | 3292151 | 3294169 | 879.6936456  | 969.8870701 | 919.5583744 | 1975.223717 | 2295.574437 | 1927.154045 | -1.185789145 | 24.32795005 | 23.61957004 |
| B7L8C0 | TY-2482_chromosome | - | 3294222 | 3295703 | 4996.603272  | 3876.953791 | 3827.975911 | 4930.11789  | 4731.785287 | 4755.643653 | -0.156293486 | 0.274395922 | 0.226137298 |
| B7L8B6 | TY-2482_chromosome | - | 3295840 | 3297102 | 9412.763803  | 7283.136677 | 7530.287508 | 10291.89879 | 10191.59323 | 9410.748559 | -0.27098886  | 0.452476803 | 0.377658275 |
| A1AHV1 | TY-2482_chromosome | - | 3297230 | 3297619 | 13621.84711  | 13122.8274  | 13116.01354 | 9949.207652 | 9775.397086 | 10499.26111 | 0.405574374  | 0.634587999 | 0.535869013 |
| B7L8C4 | TY-2482_chromosome | + | 3297889 | 3299145 | 9159.712437  | 7770.330595 | 8032.974761 | 23864.19266 | 24305.15556 | 23268.94341 | -1.493043723 | 4.765380076 | 4.413067041 |
| B7L8C1 | TY-2482_chromosome | + | 3299158 | 3299373 | 349.3241853  | 339.4492304 | 333.4598403 | 697.0555776 | 760.4805266 | 759.762784  | -1.114860009 | 20.46322759 | 19.80173461 |
| B7L8C6 | TY-2482_chromosome | + | 3299388 | 3300488 | 2734.893099  | 2337.63232  | 2512.911542 | 4775.473178 | 4474.562095 | 4388.564092 | -0.818363394 | 4.922415031 | 4.563591896 |
| B7L8C7 | TY-2482_chromosome | + | 3300503 | 3301546 | 2426.554726  | 2546.624171 | 2182.859107 | 3721.301805 | 3634.427092 | 3190.285706 | -0.600305077 | 2.681455527 | 2.425666719 |
| B7L8C8 | TY-2482_chromosome | + | 3301605 | 3302732 | 2451.16916   | 2331.359806 | 2671.962975 | 2518.118075 | 2552.413221 | 2174.638737 | 0.067085571  | 0.094823931 | 0.074976677 |
| B7L8C5 | TY-2482_chromosome | + | 3302732 | 3303991 | 3312.39215   | 3228.665438 | 3257.118166 | 2631.948681 | 2590.486107 | 2243.702812 | 0.391011555  | 1.574924832 | 1.390533441 |
| B7L8D0 | TY-2482_chromosome | + | 3303994 | 3305058 | 3271.976399  | 3344.361852 | 3351.882281 | 1767.175644 | 1699.415363 | 1598.990281 | 0.971030639  | 8.548349685 | 8.07924481  |
| B7L8D1 | TY-2482_chromosome | + | 3305080 | 3305958 | 2900.869755  | 2603.082897 | 2737.027601 | 1018.831738 | 1025.684678 | 942.0221748 | 1.482830248  | 39.56823923 | 38.70467265 |
| B7L8C9 | TY-2482_chromosome | + | 3305939 | 3306610 | 1852.893738  | 1796.058615 | 1873.441916 | 597.3748323 | 600.1030388 | 573.8779969 | 1.650184517  | 62.18757739 | 61.15768873 |
| B7L8D3 | TY-2482_chromosome | + | 3306618 | 3307745 | 2677.388812  | 2822.682152 | 2995.317475 | 1410.737543 | 1380.534265 | 1310.40276  | 1.053607806  | 20.83123367 | 20.16952172 |
| B7L8D4 | TY-2482_chromosome | + | 3307750 | 3308997 | 1840.494985  | 2054.23192  | 2085.926755 | 1725.751874 | 1816.39533  | 1628.441316 | 0.198308682  | 1.223766265 | 1.069187321 |
| B7L8D5 | TY-2482_chromosome | + | 3308997 | 3310073 | 1305.310809  | 1306.63165  | 1363.345463 | 1595.581557 | 1692.998019 | 1551.663504 | -0.277475394 | 2.279624837 | 2.047624582 |
| B7L952 | TY-2482_chromosome | + | 3310073 | 3311422 | 1129.573438  | 1138.185428 | 1080.617051 | 1008.94883  | 1027.53717  | 883.7780797 | 0.181624202  | 1.220100575 | 1.065894042 |
| B7L953 | TY-2482_chromosome | + | 3311428 | 3312165 | 1080.959669  | 1158.136187 | 1031.874834 | 388.3967393 | 378.4521713 | 366.2346154 | 1.496706102  | 46.7351792  | 45.81937725 |
| B7L954 | TY-2482_chromosome | + | 3312359 | 3313741 | 1004.080269  | 1087.048663 | 1040.244116 | 896.817393  | 1053.741813 | 969.033849  | 0.045309661  | 0.453076792 | 0.378154889 |
| argX   | TY-2482_chromosome | + | 3313847 | 3313923 | 1424.118152  | 1767.486035 | 1252.190758 | 3934.685347 | 5075.203792 | 4473.465962 | -1.694211487 | 14.42199601 | 13.84165527 |
| hisR   | TY-2482_chromosome | + | 3313981 | 3314057 | 1429.374523  | 1717.51741  | 1567.517251 | 5548.436779 | 6195.852514 | 6999.945236 | -2.02289499  | 21.87038948 | 21.1961899  |
| leuQ   | TY-2482_chromosome | + | 3314078 | 3314164 | 1391.515909  | 1577.925183 | 1310.739585 | 4464.072093 | 4940.530532 | 5220.697647 | -1.819053565 | 19.09529157 | 18.45392184 |
| proM   | TY-2482_chromosome | + | 3314207 | 3314283 | 292.0052166  | 276.7167111 | 237.6277342 | 750.8697197 | 806.0489653 | 851.5884265 | -1.595489402 | 35.0821977  | 34.25256756 |
| B7L956 | TY-2482_chromosome | + | 3314430 | 3315662 | 111.965393   | 118.7135166 | 95.33160357 | 367.2903553 | 465.3416684 | 554.6039347 | -2.12092273  | 31.27331953 | 30.48885881 |
| ryiA   | TY-2482_chromosome | - | 3316335 | 3316506 | 16216.76529  | 14959.45753 | 5460.671241 | 9915.817912 | 15561.73353 | 10213.12294 | -0.108955281 | 0.03445026  | 0.027080237 |
| B7L958 | TY-2482_chromosome | - | 3316592 | 3317785 | 7227.549194  | 6491.970793 | 6877.655584 | 8775.233855 | 8612.993878 | 7972.043475 | -0.280712735 | 0.465550088 | 0.388243947 |
| B7L959 | TY-2482_chromosome | - | 3317791 | 3318599 | 9630.038094  | 9101.936277 | 9551.35085  | 8909.941869 | 8877.298656 | 8534.819618 | 0.117570453  | 0.125895922 | 0.101103042 |
| B7L960 | TY-2482_chromosome | - | 3319024 | 3319761 | 4975.246462  | 4945.165592 | 5055.823733 | 4565.683291 | 4194.636128 | 4113.212082 | 0.219777661  | 0.346628484 | 0.287342067 |
| B5YV51 | TY-2482_chromosome | - | 3319761 | 3320714 | 9025.631613  | 8834.980891 | 9436.286633 | 8676.472834 | 7797.267406 | 7962.13373  | 0.172126333  | 0.208430558 | 0.169501617 |
| D7XDC1 | TY-2482_chromosome | - | 3320855 | 3321058 | 4439.072492  | 4929.276496 | 4349.268751 | 2266.162245 | 2125.814193 | 2279.010085 | 1.00353193   | 7.159412174 | 6.730183307 |
| B7L961 | TY-2482_chromosome | + | 3321086 | 3323629 | 19052.34851  | 18922.6773  | 19552.39533 | 17329.64667 | 15688.80503 | 16636.84646 | 0.21840447   | 0.266509171 | 0.219221689 |
| B7L964 | TY-2482_chromosome | - | 3324043 | 3325365 | 196.0527877  | 187.0982318 | 152.952411  | 240.3743968 | 239.3023419 | 219.2105893 | -0.415959287 | 1.848872667 | 1.645030989 |
| B7L965 | TY-2482_chromosome | - | 3325365 | 3326870 | 242.0103286  | 224.5088415 | 235.6356572 | 455.2370137 | 489.7186675 | 506.2051955 | -1.027614028 | 14.63870518 | 14.05370529 |
| B7L966 | TY-2482_chromosome | - | 3327211 | 3327762 | 57.88241053  | 79.5800263  | 77.26707531 | 83.20710947 | 82.91712263 | 109.172067  | -0.386803067 | 1.043407522 | 0.903481454 |
| B7L962 | TY-2482_chromosome | + | 3328112 | 3328312 | 2555.4541122 | 2732.763509 | 2781.368681 | 1358.476646 | 1281.155521 | 1281.155521 | 0.938557818  | 16.14544723 | 15.53778336 |
| B7L969 | TY-2482_chromosome | + | 3328352 | 3329173 | 4164.877982  | 4814.450871 | 4845.856887 | 2946.971481 | 2391.212229 | 2444.237362 | 0.81217702   | 4.648035532 | 4.301750411 |
| B7L970 | TY-2482_chromosome | + | 3329173 | 3329877 | 2679.207193  | 2911.480126 | 3157.535341 | 2467.202086 | 2235.39103  | 2249.198985 | 0.335743445  | 1.338400143 | 1.174151672 |
| B7L968 | TY-2482_chromosome | + | 3329877 | 3330770 | 2743.687183  | 2603.402656 | 2947.862905 | 3161.960438 | 3015.47775  | 3154.128392 | -0.140410363 | 0.466229925 | 0.388660456 |
| B7L971 | TY-2482_chromosome | + | 3330773 | 3331486 | 1352.499496  | 1319.42016  | 1476.646393 | 1935.959365 | 1867.752505 | 1749.985628 | -0.400094172 | 3.888851138 | 3.576004076 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L973</b> | TY-2482_chromosome | + | 3331573 | 3333732 | 2405.173955 | 2191.419916 | 2264.375408 | 4709.033732 | 4765.28299  | 4339.618915 | -0.996087577 | 6.778154634 | 6.36023075  |
| <b>B7L974</b> | TY-2482_chromosome | - | 3333885 | 3334646 | 133.3322126 | 142.1838963 | 126.6847842 | 157.0012103 | 165.4403725 | 161.0848168 | -0.294066972 | 0.990205454 | 0.854508468 |
| <b>B7L972</b> | TY-2482_chromosome | + | 3335016 | 3335963 | 1049.484931 | 846.0524588 | 1032.758298 | 2018.741811 | 2260.458963 | 2434.569025 | -1.132200708 | 22.46691114 | 21.78357691 |
| <b>B7L976</b> | TY-2482_chromosome | - | 3336011 | 3336499 | 6.581993355 | 6.392341345 | 7.150417163 | 36.61160959 | 42.54718337 | 54.36880592 | -2.709468749 | 10.57103131 | 10.0540285  |
| <b>B7L982</b> | TY-2482_chromosome | - | 3338672 | 3339556 | 476.2581102 | 457.7140774 | 489.80626   | 731.6508413 | 752.3888882 | 747.6482283 | -0.631108765 | 8.126957113 | 7.668232257 |
| <b>D3H4V8</b> | TY-2482_chromosome | - | 3339611 | 3340093 | 138.0225117 | 112.2375061 | 147.5733511 | 96.86897496 | 125.6714993 | 116.1283825 | 0.30192415   | 0.756285198 | 0.644822891 |
| <b>B7L984</b> | TY-2482_chromosome | + | 3340240 | 3341106 | 1029.04135  | 1103.274656 | 1021.690575 | 2208.253994 | 2483.72519  | 2238.599978 | -1.159042737 | 23.75431088 | 23.05342269 |
| <b>B7L985</b> | TY-2482_chromosome | + | 3341242 | 3343068 | 1477.086002 | 1346.806007 | 1377.945031 | 3192.053341 | 3545.885125 | 2995.180945 | -1.200133013 | 12.01501667 | 11.47480289 |
| <b>B7L983</b> | TY-2482_chromosome | + | 3343135 | 3343752 | 1758.628191 | 1658.577814 | 1825.890973 | 1640.489155 | 1527.826864 | 1659.374353 | 0.144411486  | 0.589961617 | 0.496884308 |
| <b>B7L987</b> | TY-2482_chromosome | - | 3343820 | 3344437 | 394.7754593 | 348.9273571 | 399.2254581 | 489.5998944 | 458.6266749 | 511.2975023 | -0.313629488 | 2.248221946 | 2.018590038 |
| <b>B7L988</b> | TY-2482_chromosome | + | 3344548 | 3345567 | 2270.16415  | 1949.214336 | 2167.970976 | 2959.007597 | 2953.448158 | 3128.041568 | -0.462822045 | 2.59713224  | 2.34539483  |
| <b>B7L986</b> | TY-2482_chromosome | + | 3345578 | 3346375 | 917.0978286 | 1045.917658 | 934.0699061 | 2037.421994 | 2046.456777 | 1995.156425 | -1.107704561 | 22.38435781 | 21.70228058 |
| <b>B7L991</b> | TY-2482_chromosome | - | 3347244 | 3348194 | 240.5783608 | 220.6062676 | 255.4621484 | 195.0136163 | 168.4936644 | 192.622399  | 0.400782616  | 1.925531068 | 1.716933783 |
| <b>B7L992</b> | TY-2482_chromosome | + | 3348312 | 3350570 | 1339.448529 | 1388.17371  | 1356.327027 | 439.7607588 | 433.3490326 | 360.1504974 | 1.171688654  | 58.85475393 | 57.85196103 |
| <b>B7L989</b> | TY-2482_chromosome | - | 3350615 | 3351427 | 1711.900083 | 1870.50825  | 1824.618207 | 669.0995925 | 547.2320224 | 505.6501972 | 1.626501718  | 49.98224517 | 49.04664916 |
| <b>B7L994</b> | TY-2482_chromosome | + | 3351689 | 3352447 | 8313.852919 | 8433.985494 | 8817.068431 | 35793.77448 | 30759.03198 | 31714.61135 | -1.939238084 | 6.99138403  | 6.567959773 |
| <b>B7L995</b> | TY-2482_chromosome | + | 3352591 | 3354015 | 1300.249389 | 1273.127913 | 1287.345176 | 3768.765382 | 3637.732688 | 3895.474357 | -1.543761003 | 19.59339358 | 18.94819744 |
| <b>B7L996</b> | TY-2482_chromosome | + | 3354113 | 3354865 | 3959.574248 | 3896.898726 | 4335.738606 | 4717.55358  | 4451.056872 | 4412.563637 | -0.135525719 | 0.258139481 | 0.12201451  |
| <b>B7L993</b> | TY-2482_chromosome | + | 3354882 | 3355484 | 3208.214771 | 3127.573448 | 2964.235481 | 3462.733079 | 3557.197352 | 3332.909286 | -0.163487091 | 0.38065222  | 0.31473369  |
| <b>B7L998</b> | TY-2482_chromosome | + | 3355484 | 3357121 | 6677.220803 | 7253.131207 | 6854.73092  | 7120.534313 | 6807.290065 | 6469.407136 | 0.003199007  | 0.031375063 | 0.024624009 |
| <b>B7L997</b> | TY-2482_chromosome | + | 3357203 | 3357469 | 4145.112965 | 4400.346669 | 4683.451469 | 4146.746877 | 3954.972466 | 4158.246327 | 0.115791829  | 0.173638745 | 0.140100137 |
| <b>B7L9A0</b> | TY-2482_chromosome | + | 3357476 | 3357988 | 6333.789113 | 5929.920248 | 6199.489659 | 7441.822618 | 6337.791088 | 6309.135049 | -0.111219361 | 0.159142732 | 0.120127701 |
| <b>B7L9A1</b> | TY-2482_chromosome | + | 3357994 | 3358767 | 4409.463694 | 4218.273792 | 4357.604609 | 6813.722933 | 6321.633522 | 6279.3882   | -0.571731991 | 1.295898944 | 1.135820946 |
| <b>B5Y988</b> | TY-2482_chromosome | + | 3358800 | 3359591 | 1524.316711 | 1370.327201 | 1494.129211 | 2077.043435 | 2160.132831 | 2215.049112 | -0.526109826 | 6.320582047 | 5.912787284 |
| <b>B7L9A3</b> | TY-2482_chromosome | - | 3359594 | 3360079 | 809.3551247 | 836.6477325 | 746.015983  | 1468.96941  | 1817.268467 | 1863.216613 | -1.124669731 | 22.05999925 | 21.38332739 |
| <b>B7L9A4</b> | TY-2482_chromosome | + | 3360246 | 3361736 | 10346.91834 | 9946.192278 | 10518.21251 | 9207.281352 | 9305.884787 | 8451.284512 | 0.204283407  | 0.258681173 | 0.210123015 |
| <b>B7L999</b> | TY-2482_chromosome | + | 3361785 | 3362483 | 5107.18803  | 5460.030315 | 5436.523602 | 2422.95638  | 2259.542373 | 2103.923594 | 1.224431238  | 9.791461854 | 9.290467836 |
| <b>B7L9A6</b> | TY-2482_chromosome | - | 3362681 | 3363841 | 840.8203158 | 947.5704413 | 912.2871943 | 637.3292752 | 619.1802299 | 520.8312479 | 0.575393496  | 7.195821513 | 6.765187919 |
| <b>B7L9A7</b> | TY-2482_chromosome | - | 3363854 | 3366040 | 348.6188155 | 399.3659158 | 426.2993533 | 262.7880112 | 246.470525  | 206.8128623 | 0.703536613  | 6.514523191 | 6.103378235 |
| <b>B7L9A5</b> | TY-2482_chromosome | + | 3366230 | 3367558 | 11104.26595 | 10181.49798 | 11512.27775 | 8116.283143 | 7353.41151  | 7258.084392 | 0.558205668  | 0.982024086 | 0.847230595 |
| <b>B7L9A8</b> | TY-2482_chromosome | + | 3367561 | 3368172 | 3438.938148 | 3136.112078 | 3295.887809 | 2570.545397 | 2712.763378 | 2814.551022 | 0.30826899   | 0.917841279 | 0.78917467  |
| <b>B7L9A9</b> | TY-2482_chromosome | + | 3368214 | 3369662 | 2647.89988  | 2705.914161 | 2774.238086 | 3721.407857 | 4049.932465 | 3833.506001 | -0.510841438 | 2.150660661 | 1.926602348 |
| <b>B7L9B1</b> | TY-2482_chromosome | + | 3369677 | 3370219 | 954.8408807 | 1193.691793 | 1038.896252 | 1080.952929 | 1207.156276 | 1131.06757  | -0.154580686 | 0.506791616 | 0.423519654 |
| <b>E9WNY3</b> | TY-2482_chromosome | - | 3370513 | 3370746 | 271744.64   | 1233132.068 | 535125.6393 | 1589.706499 | 493.9512767 | 329.6398752 | 9.262628662  | 34.75036206 | 33.92589908 |
| <b>rrsD</b>   | TY-2482_chromosome | + | 3370600 | 3372141 | 1880848.577 | 8277452.881 | 4066378.285 | 2748.498316 | 519.0941752 | 177.4864158 | 11.55845343  | 31.81080696 | 31.01940572 |
| <b>Q57H85</b> | TY-2482_chromosome | + | 3371721 | 3372038 | 457472.372  | 2051328.305 | 937884.0788 | 196.7465596 | 126.2348458 | 57.14238082 | 12.71908133  | 56.72554255 | 55.74825372 |
| <b>ileT</b>   | TY-2482_chromosome | + | 3372210 | 3372286 | 1155.057472 | 1352.496382 | 704.2069351 | 3599.338697 | 5777.933744 | 5423.914404 | -2.336005158 | 18.57877211 | 17.94232684 |
| <b>alaT</b>   | TY-2482_chromosome | + | 3372329 | 3372404 | 664.9308662 | 636.8843718 | 359.3908052 | 2343.224336 | 3763.00401  | 3488.867173 | -2.610856391 | 40.72989188 | 39.85833982 |
| <b>rrlE</b>   | TY-2482_chromosome | + | 3372588 | 3375491 | 1017646.815 | 1039955.74  | 2819297.67  | 2484.464909 | 845.6869687 | 254.4361314 | 11.23107605  | 30.76987855 | 29.99068207 |
| <b>Q1R3T8</b> | TY-2482_chromosome | - | 3372814 | 3373116 | 187568.7796 | 1536160.694 | 501880.2128 | 303.6348538 | 81.25018156 | 21.80254293 | 11.78674099  | 32.30616314 | 31.50661374 |
| <b>C1HUN3</b> | TY-2482_chromosome | - | 3374174 | 3374377 | 61070.25084 | 735511.3531 | 197379.9608 | 84.43867655 | 21.28165348 | 6.512228146 | 12.39394497  | 33.18057881 | 32.36935862 |
| <b>C1HUN1</b> | TY-2482_chromosome | - | 3374454 | 3374906 | 194314.0606 | 2160294.651 | 531836.5638 | 428.7657477 | 112.1228883 | 36.91147686 | 11.52326963  | 29.91601075 | 29.14613203 |
| <b>C1HUN0</b> | TY-2482_chromosome | - | 3374910 | 3375266 | 162281.8133 | 1649426.851 | 449095.0936 | 535.9042508 | 151.7775504 | 10.89127234 | 33.58050275  | 27.38604938 | 26.64442338 |
| <b>Q1R8D8</b> | TY-2482_chromosome | - | 3375470 | 3375761 | 10872.12844 | 51199.31109 | 6205.405943 | 675.0432429 | 70.05689903 | 36.32479976 | 5.637687245  | 12.28285814 | 11.73687191 |
| <b>rrfC</b>   | TY-2482_chromosome | + | 3375585 | 3375704 | 8031.693486 | 29055.96346 | 350.6226637 | 662.7689571 | 56.95747106 | 29.42830687 | 4.740928844  | 7.256908527 | 6.823451773 |
| <b>C8UKB4</b> | TY-2482_chromosome | - | 3375810 | 3376334 | 346.1427727 | 310.1503641 | 363.2084265 | 216.4942472 | 264.6919657 | 225.2871046 | 0.568840117  | 4.037580385 | 3.71770371  |
| <b>B7L9B3</b> | TY-2482_chromosome | - | 3376319 | 3376900 | 546.2462185 | 570.9168317 | 541.7793059 | 375.7035408 | 444.5042324 | 402.7156796 | 0.425914142  | 3.624591391 | 3.324583264 |
| <b>B7L9B4</b> | TY-2482_chromosome | + | 3376970 | 3377236 | 3166.394075 | 3501.515619 | 3069.169216 | 2915.700977 | 2838.905617 | 2921.149423 | 0.128875323  | 0.433464458 | 0.361119374 |
| <b>B7L9B0</b> | TY-2482_chromosome | + | 3377316 | 3378299 | 2928.743079 | 2866.858923 | 2790.295278 | 3764.34719  | 3826.461818 | 3743.730508 | -0.403706772 | 1.458061676 | 1.283923476 |
| <b>B7L9B6</b> | TY-2482_chromosome | + | 3378319 | 3378942 | 5552.317133 | 5627.968947 | 5703.785269 | 3120.249033 | 3214.276796 | 3151.715444 | 0.832942673  | 2.41187242  | 2.171176991 |
| <b>B7L9B7</b> | TY-2482_chromosome | + | 3379100 | 3380527 | 165.6460908 | 156.9723764 | 159.5495526 | 638.8481634 | 306.9530776 | 287.9116254 | -0.777194267 | 6.180638333 | 5.777930856 |
| <b>B7L9B8</b> | TY-2482_chromosome | - | 3380574 | 3381503 | 154.3061623 | 163.5055595 | 136.9232688 | 292.2933152 | 923.8184872 | 891.2179735 | -2.494662312 | 59.07548164 | 58.07093401 |
| <b>B7L9B5</b> | TY-2482_chromosome | + | 3381867 | 3384650 | 10229.80868 | 10149.45293 | 9745.530163 | 7303.929323 | 7139.209764 | 6923.014659 | 0.4869222    | 0.912665196 | 0.784349438 |
| <b>spf</b>    | TY-2482_chromosome | + | 3384801 | 3384909 | 217.0953444 | 217.5089886 | 154.6792635 | 145.9160277 | 209.6404652 | 244.848968  | -0.071311042 | 0.065789276 | 0.051821345 |
| <b>A1A147</b> | TY-2482_chromosome | - | 3385038 | 3385685 | 3606.84686  | 3596.039629 | 3860.28664  | 2742.864839 | 2689.938925 | 2794.140256 | 0.442089109  | 1.699114334 | 1.50490264  |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B6I4K2 | TY-2482_chromosome | - | 3385706 | 3385939 | 20.32661749 | 20.89835758 | 35.03076582 | 28.03708235 | 45.07083415 | 36.80630792 | -0.445074998 | 0.995098638 | 0.858759824  |
| csrC   | TY-2482_chromosome | + | 3385938 | 3386182 | 14855.40096 | 23804.74906 | 16262.95531 | 18045.64253 | 24736.1852  | 21676.22218 | -0.368353357 | 0.27793359  | 0.228993872  |
| B7L9B9 | TY-2482_chromosome | + | 3386249 | 3386755 | 2081.59976  | 1869.101567 | 1889.488586 | 654.3262597 | 763.8200055 | 814.5136145 | 1.40839288   | 38.39804723 | 37.54050589  |
| B7L9C1 | TY-2482_chromosome | + | 3386947 | 3388317 | 4017.731388 | 3802.01011  | 3972.540877 | 4798.349581 | 4467.921983 | 4205.61036  | -0.182084688 | 0.375519909 | 0.310410686  |
| B7L9C2 | TY-2482_chromosome | - | 3388735 | 3390141 | 1783.079658 | 1767.650336 | 1818.853634 | 2622.974708 | 2974.462553 | 2476.772085 | -0.584936556 | 6.622828422 | 6.20853313   |
| B7L9C3 | TY-2482_chromosome | - | 3390156 | 3391202 | 1295.104549 | 1191.170553 | 1224.184455 | 3222.948781 | 3956.382559 | 2982.486552 | -1.442940332 | 19.51448056 | 18.87050241  |
| B7L9C4 | TY-2482_chromosome | - | 3391491 | 3392897 | 12338.92735 | 10846.50436 | 10637.87841 | 34395.41966 | 45713.1136  | 42048.78241 | -1.835827266 | 6.220700969 | 5.817333303  |
| B5BJ09 | TY-2482_chromosome | - | 3392879 | 3393298 | 3365.508946 | 3182.305714 | 2774.905281 | 4503.871536 | 6549.351975 | 6223.476434 | -0.899609049 | 2.526439809 | 2.278260308  |
| B7L9C6 | TY-2482_chromosome | + | 3393270 | 3395090 | 25685.12881 | 24223.57465 | 25254.83857 | 15534.20903 | 17234.21579 | 15690.08233 | 0.647508538  | 1.137759523 | 0.989835619  |
| B7L9C7 | TY-2482_chromosome | + | 3395310 | 3396017 | 188.4423837 | 201.7829748 | 165.7101179 | 367.3876418 | 401.6485761 | 343.8803601 | -1.048380441 | 11.23215809 | 10.70179133  |
| B7L9C5 | TY-2482_chromosome | + | 3396028 | 3397005 | 213.4711275 | 261.0782363 | 222.8926251 | 247.9297377 | 291.2161732 | 229.5354742 | -0.1978165   | 0.509307192 | 0.425594167  |
| B7L9C9 | TY-2482_chromosome | + | 3397110 | 3398372 | 191.1687735 | 241.366962  | 242.457633  | 220.9654964 | 235.7359916 | 254.527712  | -0.095032031 | 0.223828506 | 0.182609782  |
| B7L9C8 | TY-2482_chromosome | - | 3398489 | 3399274 | 1277.660534 | 1241.336645 | 1360.353923 | 1105.985001 | 1083.179784 | 1161.294358 | 0.233821642  | 1.504959203 | 1.326906063  |
| B7L9D1 | TY-2482_chromosome | - | 3399317 | 3400249 | 191.2314906 | 353.3209955 | 267.8006125 | 222.5127257 | 219.2244391 | 235.4664588 | 0.35487635   | 2.323122712 | 2.088741124  |
| B7L9D2 | TY-2482_chromosome | + | 3400182 | 3401258 | 39.94479536 | 63.87821572 | 48.92134911 | 66.7346877  | 72.30809837 | 87.80378834 | -0.658781964 | 1.784215787 | 1.584940574  |
| B7L9D0 | TY-2482_chromosome | + | 3401286 | 3402170 | 67.62360414 | 49.75321832 | 58.98511216 | 124.3468484 | 102.2669625 | 108.446632  | -0.875720769 | 4.86653534  | 4.509299395  |
| B7L9D4 | TY-2482_chromosome | + | 3402206 | 3403213 | 134.4619642 | 118.8613152 | 119.458991  | 211.1558462 | 206.3231967 | 169.5348458 | -0.649302986 | 3.849137084 | 3.538785975  |
| B7L9D5 | TY-2482_chromosome | + | 3403286 | 3404716 | 172.5877243 | 122.5437211 | 128.3293525 | 243.1763349 | 258.6546818 | 248.0553081 | -0.780269427 | 5.936718152 | 5.541639632  |
| B7L9D3 | TY-2482_chromosome | + | 3404818 | 3406164 | 57.59554751 | 81.47458944 | 63.39988112 | 102.2816265 | 133.4689438 | 133.95324   | -0.944342098 | 4.402176887 | 4.066384785  |
| B7L9D7 | TY-2482_chromosome | + | 3406100 | 3407041 | 179.4537849 | 254.1649642 | 170.2063476 | 210.2744948 | 198.9009795 | 182.2915264 | -0.096172764 | 0.005274313 | 0.003705517  |
| D3H517 | TY-2482_chromosome | + | 3407164 | 3407781 | 1227.995933 | 1517.430889 | 1412.238992 | 817.3320663 | 734.0725045 | 716.9086578 | 0.831084726  | 14.76060547 | 14.17426517  |
| B7L9D9 | TY-2482_chromosome | + | 3407778 | 3408647 | 1529.677041 | 1717.44477  | 1461.535537 | 983.7186814 | 868.6485254 | 881.382414  | 0.7354743    | 13.19384811 | 12.72592764  |
| B7L9D6 | TY-2482_chromosome | + | 3408647 | 3409081 | 1008.349946 | 1179.753983 | 1109.140033 | 1350.557773 | 1219.77912  | 1317.677174 | -0.268425993 | 1.715259023 | 1.519957505  |
| B7L9E1 | TY-2482_chromosome | + | 3409081 | 3410067 | 1765.535665 | 1904.540244 | 1905.009684 | 2802.247572 | 2621.524362 | 2615.698127 | -0.538821954 | 4.604618079 | 4.259875061  |
| B7L9E2 | TY-2482_chromosome | - | 3410137 | 3411117 | 265.0372581 | 281.2824384 | 257.3841048 | 598.6713078 | 627.3680461 | 628.4817063 | -1.228484626 | 21.2006632  | 20.53500739  |
| B7L9E0 | TY-2482_chromosome | + | 3411271 | 3411579 | 158.8278716 | 199.0388346 | 222.0229677 | 160.1645703 | 163.9728658 | 171.4345521 | 0.227125994  | 0.757559017 | 0.645759219  |
| B7L9E4 | TY-2482_chromosome | + | 3411583 | 3411870 | 378.894825  | 393.9129614 | 387.9363625 | 312.9269671 | 301.1156721 | 305.6303111 | 0.327423268  | 2.129665614 | 1.907497754  |
| D8ET41 | TY-2482_chromosome | + | 3412897 | 3413136 | 27.81125244 | 34.7176501  | 26.14148875 | 44.73980411 | 49.68667705 | 37.04231656 | -0.643985784 | 1.364053393 | 1.197385448  |
| B7L9E7 | TY-2482_chromosome | - | 3413472 | 3414398 | 4980.12683  | 4763.856475 | 5253.892962 | 11787.60496 | 11927.8527  | 11699.6092  | -1.216413176 | 3.888299131 | 3.575630828  |
| B7L9E8 | TY-2482_chromosome | - | 3414398 | 3415030 | 5243.634036 | 5334.316849 | 5660.514189 | 15381.18331 | 15413.00419 | 15819.29026 | -1.510685315 | 5.233387552 | 4.861653644  |
| B7L9E9 | TY-2482_chromosome | - | 3415030 | 3415929 | 7908.919801 | 7458.452212 | 8223.640811 | 23539.2243  | 22369.23948 | 22305.38631 | -1.508523391 | 4.903214964 | 4.545186149  |
| B7L9E5 | TY-2482_chromosome | - | 3415945 | 3418992 | 33678.28557 | 29126.03611 | 32428.36158 | 67296.13194 | 65014.27341 | 63449.75491 | -1.005590602 | 2.270823969 | 2.039713359  |
| B7L9F1 | TY-2482_chromosome | + | 3419186 | 3420016 | 832.6639424 | 873.3561693 | 953.6380488 | 1170.134614 | 1217.773517 | 1205.27728  | -0.421373074 | 4.496454719 | 4.156495783  |
| B7L9F2 | TY-2482_chromosome | + | 3420172 | 3421209 | 29.32740886 | 41.11125137 | 22.22515773 | 60.27470793 | 69.21253903 | 48.84698098 | -1.08381107  | 3.118189729 | 2.840695772  |
| B7L9F0 | TY-2482_chromosome | - | 3421265 | 3423010 | 75.00671786 | 74.17584762 | 83.09272551 | 124.0045692 | 140.8505651 | 135.8631428 | -0.765386308 | 4.347759773 | 4.015383412  |
| B7L9F4 | TY-2482_chromosome | - | 3423013 | 3424080 | 103.7049695 | 91.54944585 | 96.34883613 | 101.6607066 | 84.01825951 | 102.0411872 | 0.040025947  | 0.042040284 | 0.03316337   |
| B7L9F5 | TY-2482_chromosome | - | 3424073 | 3425521 | 42.32333044 | 43.95326898 | 41.75272933 | 72.61922743 | 83.91627884 | 75.80932271 | -0.873820688 | 3.587155716 | 3.286647395  |
| B7L9F7 | TY-2482_chromosome | - | 3426294 | 3426605 | 20.77708178 | 20.62963083 | 14.79708661 | 28.61849019 | 35.20647846 | 32.20356283 | -0.819883682 | 1.618224581 | 1.429555709  |
| B7L9F8 | TY-2482_chromosome | - | 3426618 | 3427439 | 32.1218957  | 28.51474561 | 26.14880504 | 46.10315986 | 38.87642235 | 46.24385629 | -0.60081259  | 1.405772541 | 1.236157609  |
| B7L9F3 | TY-2482_chromosome | - | 3427684 | 3428940 | 45.80849546 | 35.1623887  | 59.5678841  | 55.64339336 | 59.27552926 | 57.50311171 | -0.192917638 | 0.557196467 | 0.467447924  |
| B7L9G0 | TY-2482_chromosome | - | 3428940 | 3430406 | 56.56767018 | 58.32707997 | 45.05895709 | 62.35040335 | 69.97131218 | 79.79484637 | -0.446491079 | 1.129193668 | 0.98212746   |
| B7L9G1 | TY-2482_chromosome | + | 3430694 | 3431527 | 74.25478664 | 74.59948768 | 55.27326872 | 103.7469683 | 93.25303471 | 75.5164814  | -0.476929575 | 1.290532358 | 1.131333881  |
| B7L9G2 | TY-2482_chromosome | + | 3431514 | 3432449 | 221.6268313 | 262.8705827 | 241.3971187 | 302.7711665 | 265.925024  | 293.8111381 | -0.285089139 | 1.166170865 | 1.016030926  |
| B7L9F9 | TY-2482_chromosome | - | 3432452 | 3433483 | 183.1504029 | 135.9732886 | 180.733575  | 165.2889786 | 166.2924034 | 153.4328154 | 0.116900842  | 0.141968463 | 0.11458884   |
| D3GRW3 | TY-2482_chromosome | + | 3433762 | 3434385 | 26913.59676 | 23420.25481 | 25588.1439  | 5232.038203 | 5279.586654 | 5092.116244 | 2.313438947  | 9.679380338 | 9.181408944  |
| C6V0W7 | TY-2482_chromosome | + | 3434648 | 3435628 | 191.7119507 | 207.0427071 | 168.5983818 | 13017.81566 | 9734.855938 | 10837.16379 | -5.939578956 | 52.86722349 | 51.9093116   |
| D3GRW5 | TY-2482_chromosome | + | 3435750 | 3436451 | 1625.641767 | 1780.559359 | 1645.207015 | 3135.429814 | 2875.748478 | 3497.237006 | -0.933902468 | 7.15313666  | 6.724141474  |
| B7L9G7 | TY-2482_chromosome | - | 3436563 | 3437933 | 5090.769399 | 5057.191674 | 5436.380586 | 3946.887449 | 3851.532264 | 3786.019175 | 0.441147123  | 0.860940205 | 0.737159896  |
| B7L9G3 | TY-2482_chromosome | - | 3437933 | 3438628 | 3893.070219 | 4012.163417 | 4314.22761  | 2659.42691  | 2474.232081 | 2464.67381  | 0.693812519  | 3.467213376 | 3.173088048  |
| B7L8D2 | TY-2482_chromosome | + | 3438778 | 3439275 | 3315.356004 | 3248.589357 | 2888.288187 | 2932.440642 | 3423.412372 | 3510.812084 | -0.075982405 | 0.129692125 | 0.104438455  |
| B7LA12 | TY-2482_chromosome | + | 3439427 | 3440326 | 3013.665127 | 3067.689666 | 3251.122029 | 1852.571658 | 1842.361114 | 1911.611293 | 0.745549977  | 5.162165637 | 4.1793898761 |
| B7LA13 | TY-2482_chromosome | + | 3440510 | 3441469 | 29956.90431 | 29473.83475 | 32801.67126 | 28606.32104 | 24840.78331 | 26817.7369  | 0.221306967  | 0.238228889 | 0.494996653  |
| E1IU15 | TY-2482_chromosome | + | 3441512 | 3441728 | 2293.052899 | 2189.18141  | 2083.540481 | 3032.501766 | 3359.18057  | 3331.92643  | -0.56762042  | 3.18317606  | 2.902207067  |
| B7LA14 | TY-2482_chromosome | + | 3441792 | 3442778 | 648.2167126 | 570.8603501 | 633.5123646 | 1148.364757 | 1388.443581 | 1626.690173 | -1.123843819 | 20.19636356 | 19.54419377  |
| B7LA15 | TY-2482_chromosome | + | 3442888 | 3443640 | 605.9553173 | 603.6771423 | 526.3179562 | 906.7190105 | 828.6790466 | 917.274536  | -0.635967288 | 7.594291863 | 7.149355292  |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7LA16 | TY-2482_chromosome | - | 3443701 | 3444465 | 28563.87185 | 27529.70301 | 30471.35291 | 29147.9734  | 24975.95015 | 25909.20145 | 0.13313071   | 0.123533468 | 0.09920089   |
| B7LA11 | TY-2482_chromosome | - | 3444576 | 3445172 | 562.9041921 | 662.1499053 | 592.0703422 | 463.5061427 | 400.7686827 | 401.5742582 | 0.475963653  | 4.678601213 | 4.33038073   |
| B7LA18 | TY-2482_chromosome | + | 3445273 | 3445710 | 234.9888716 | 267.6947623 | 311.095724  | 149.4418239 | 175.8169814 | 165.2941413 | 0.747960979  | 5.605975294 | 5.219878074  |
| B7LA19 | TY-2482_chromosome | + | 3445925 | 3446221 | 1033.227358 | 1307.617057 | 1319.96359  | 992.0844257 | 917.2652954 | 1003.803717 | 0.306596959  | 2.464349653 | 2.220615061  |
| B7LA20 | TY-2482_chromosome | + | 3446251 | 3446676 | 1850.205789 | 1978.434452 | 2144.672499 | 1762.772966 | 1734.012256 | 1851.401777 | 0.169939398  | 0.827016195 | 0.707609947  |
| B7LA17 | TY-2482_chromosome | - | 3446687 | 3447430 | 4004.742253 | 3725.196457 | 4044.274294 | 2506.885439 | 2400.473698 | 2363.402657 | 0.716980596  | 3.78785256  | 3.47998314   |
| B7LA22 | TY-2482_chromosome | - | 3447530 | 3448537 | 1976.235189 | 1787.18713  | 1982.545035 | 3968.30044  | 3431.047785 | 4465.594041 | -1.010257432 | 7.716347188 | 7.269223955  |
| B7LA23 | TY-2482_chromosome | - | 3448676 | 3450181 | 1306.16422  | 1210.938138 | 1080.951686 | 39197.88591 | 34462.85482 | 45815.03541 | -5.058200109 | 32.25655397 | 31.4580999   |
| B7LA24 | TY-2482_chromosome | - | 3450207 | 3451049 | 634.4485606 | 494.2587164 | 518.9779568 | 4878.486383 | 4180.110425 | 6383.381934 | -3.180103284 | 50.2471559  | 49.31005714  |
| B7LA21 | TY-2482_chromosome | + | 3451475 | 3451717 | 6043.599084 | 6963.027928 | 6532.832151 | 7429.540652 | 7309.581706 | 8522.75155  | -0.27535817  | 0.372922831 | 0.308116709  |
| A1AIA4 | TY-2482_chromosome | + | 3451862 | 3452365 | 13329.21795 | 12933.08814 | 12403.52321 | 8581.997759 | 7821.437415 | 8756.263775 | 0.616841596  | 1.21520039  | 1.061737726  |
| B5YZ70 | TY-2482_chromosome | - | 3452386 | 3453321 | 593.1781953 | 593.8891679 | 563.4024115 | 678.6888823 | 654.2436345 | 595.234304  | -0.154309778 | 0.680996427 | 0.577224894  |
| B7LA28 | TY-2482_chromosome | - | 3453379 | 3454707 | 5525.375769 | 4648.173615 | 4750.099448 | 1850.294885 | 1963.367698 | 1694.138403 | 1.458311954  | 12.51815671 | 11.96971683  |
| B7LA29 | TY-2482_chromosome | - | 3454720 | 3455247 | 1688.176047 | 1561.434271 | 1434.304265 | 818.3996785 | 894.8302026 | 726.2397197 | 0.92990189   | 17.7341719  | 17.10704261  |
| B7LA30 | TY-2482_chromosome | - | 3455343 | 3456299 | 1414.075111 | 1400.667616 | 1413.763436 | 2805.405783 | 2732.126122 | 2547.366729 | -0.935687519 | 16.44721133 | 15.83813512  |
| B7LA31 | TY-2482_chromosome | - | 3456394 | 3457416 | 1061.781896 | 1149.041674 | 1153.581991 | 2311.589773 | 1645.901181 | 1460.955581 | -0.710749208 | 6.633542702 | 6.219021508  |
| B7LA32 | TY-2482_chromosome | - | 3457573 | 3459770 | 680.6866996 | 619.1511704 | 638.0096084 | 1639.113487 | 1902.234595 | 1704.131405 | -1.42015693  | 39.90389712 | 39.03749232  |
| B7LA33 | TY-2482_chromosome | + | 3459975 | 3460182 | 30939.60999 | 28534.07374 | 28279.36965 | 26088.49852 | 31997.58774 | 34096.17448 | -0.054803066 | 0.073164414 | 0.057936876  |
| B7LA34 | TY-2482_chromosome | + | 3460345 | 3464526 | 851.2590753 | 721.9150363 | 821.7056671 | 847.3648332 | 967.9621998 | 931.881361  | -0.154235239 | 1.095585047 | 0.951193497  |
| C6V0Z8 | TY-2482_chromosome | + | 3464531 | 3464764 | 17.98112062 | 20.6026401  | 17.38095468 | 23.97756286 | 33.67372005 | 40.0275668  | -0.832571659 | 1.70510886  | 1.510488802  |
| Q0H058 | TY-2482_chromosome | - | 3464826 | 3465615 | 218.0126639 | 146.6894174 | 166.997135  | 237.5788685 | 291.4233462 | 311.3955974 | -0.589714192 | 3.991182056 | 3.673841943  |
| C8UKJ8 | TY-2482_chromosome | + | 3465538 | 3465828 | 137.4923505 | 114.342248  | 116.6420438 | 150.0008759 | 160.7014222 | 168.3055659 | 0.353014009  | 1.485210671 | 1.308858339  |
| B5YZ79 | TY-2482_chromosome | - | 3465763 | 3466367 | 313.6554959 | 335.3389339 | 283.4732332 | 331.8771911 | 355.7700225 | 317.3008553 | -0.149661682 | 0.41823915  | 0.347739949  |
| B7LA39 | TY-2482_chromosome | - | 3466430 | 3466744 | 1066.450188 | 1110.605218 | 1101.965101 | 790.3552188 | 802.2811482 | 801.5086405 | 0.447864922  | 5.11876156  | 4.751306449  |
| B7LA40 | TY-2482_chromosome | + | 3467021 | 3468178 | 620.6214372 | 584.5752093 | 579.1701515 | 473.3357429 | 521.0853148 | 481.3828458 | 0.278639075  | 1.82667901  | 1.624364828  |
| B7LA41 | TY-2482_chromosome | + | 3468184 | 3470613 | 2183.991802 | 1947.207723 | 1992.904543 | 1722.759651 | 1550.245848 | 1492.134462 | -0.374538514 | 2.964247957 | 2.803755892  |
| B7LA42 | TY-2482_chromosome | + | 3470965 | 3471852 | 167.4155418 | 171.3267454 | 161.0877392 | 262.9552581 | 319.7827    | 307.7131903 | -0.843156756 | 7.51544317  | 7.07316432   |
| B7LA43 | TY-2482_chromosome | + | 3472184 | 3474361 | 7751.273833 | 7650.608855 | 7758.353886 | 13664.78103 | 12146.50769 | 12344.47464 | -0.719234074 | 1.542873576 | 1.361926881  |
| D3G501 | TY-2482_chromosome | + | 3474425 | 3475360 | 857.7538214 | 727.4347035 | 826.0238412 | 823.164014  | 794.9003368 | 844.016237  | 0.011749166  | 0.073666115 | 0.058348465  |
| B7LA45 | TY-2482_chromosome | - | 3475393 | 3476007 | 134.9617036 | 142.6053033 | 129.5205654 | 169.4540901 | 191.9819023 | 228.8197178 | -0.55023783  | 2.773537628 | 2.513963584  |
| B7LA46 | TY-2482_chromosome | - | 3476285 | 3477385 | 4741.140007 | 4321.390674 | 5095.700858 | 6888.851543 | 6575.75694  | 6851.888303 | -0.485799612 | 1.094981524 | 0.950832529  |
| B7LA47 | TY-2482_chromosome | - | 3477399 | 3478058 | 412.0310031 | 322.7516422 | 363.5813997 | 561.8954152 | 556.8233216 | 539.3740787 | -0.548833926 | 5.45137767  | 5.070121195  |
| B7LA48 | TY-2482_chromosome | - | 3478073 | 3480571 | 277.88023   | 258.4791529 | 282.9101939 | 352.0621472 | 276.6514061 | 297.1382763 | -0.157829368 | 0.649229551 | 0.548540476  |
| B7LA49 | TY-2482_chromosome | + | 3480880 | 3481956 | 33.67656483 | 32.11478803 | 24.90216707 | 35.16995763 | 27.89328298 | 24.19322646 | 0.009315839  | 0.045339995 | 0.035841074  |
| B7LA44 | TY-2482_chromosome | + | 3481974 | 3482291 | 27.00985416 | 19.53545611 | 20.38297252 | 51.4240394  | 39.13612781 | 33.70318116 | -0.872041455 | 2.317726839 | 2.083792747  |
| B7LA51 | TY-2482_chromosome | + | 3482345 | 3484639 | 346.7287866 | 266.3571431 | 277.649002  | 355.4447284 | 348.0102639 | 309.2901008 | -0.154035435 | 0.669367515 | 0.566258353  |
| B7LA52 | TY-2482_chromosome | + | 3484608 | 3485483 | 85.6848054  | 66.53971008 | 80.40025538 | 114.6219662 | 107.5682734 | 113.2787489 | -0.475134469 | 2.043004065 | 1.826315425  |
| B7LA53 | TY-2482_chromosome | + | 3485488 | 3485826 | 57.90561238 | 50.68871203 | 44.97701868 | 48.40605419 | 64.63027138 | 52.19418311 | -0.112185324 | 0.153570778 | 0.123495685  |
| B7LA50 | TY-2482_chromosome | - | 3485819 | 3486667 | 293.6078745 | 267.3366484 | 246.1140581 | 254.1547801 | 240.8569643 | 221.9002019 | 0.161842299  | 0.630149411 | 0.53197609   |
| B7LA55 | TY-2482_chromosome | - | 3486885 | 3488615 | 3224.487489 | 3035.118162 | 3109.144022 | 1868.617211 | 1937.567672 | 1781.822308 | 0.754896136  | 5.279360913 | 4.904956943  |
| B7LA56 | TY-2482_chromosome | - | 3488801 | 3491449 | 11525.06156 | 11000.51421 | 10787.15498 | 9452.304371 | 8481.743489 | 8276.383366 | 0.343294766  | 0.536759189 | 0.449044318  |
| B7LA57 | TY-2482_chromosome | - | 3491804 | 3492952 | 1171.633102 | 1043.07289  | 1163.621832 | 1282.537078 | 1193.302517 | 1114.109689 | -0.05960127  | 0.367383604 | 0.303687051  |
| B7LA58 | TY-2482_chromosome | + | 3493106 | 3494107 | 427.4436932 | 472.3657552 | 374.1419346 | 965.9712752 | 1201.631459 | 917.2888472 | -1.335315304 | 23.03013285 | 22.33875198  |
| C6V122 | TY-2482_chromosome | + | 3494118 | 3494891 | 375.0366642 | 345.626466  | 333.6024548 | 294.9430623 | 278.6774121 | 248.9383    | 0.354684033  | 2.15305819  | 1.928708307  |
| B7LA60 | TY-2482_chromosome | + | 3494955 | 3496325 | 921.1798915 | 861.8830347 | 823.5444898 | 524.2128178 | 494.1773878 | 480.8217289 | 0.794152222  | 12.9915132  | 12.4346884   |
| B7LA61 | TY-2482_chromosome | + | 3496826 | 3498037 | 140.147437  | 123.5180751 | 174.4893596 | 91.41311101 | 93.78061423 | 104.4406007 | 0.672876122  | 3.133363662 | 2.854879671  |
| B7LA59 | TY-2482_chromosome | + | 3498107 | 3499387 | 167.6484025 | 150.2136872 | 196.2371854 | 112.6280647 | 110.7766134 | 106.118918  | 0.696607821  | 3.975139345 | 3.6308160391 |
| oxyS   | TY-2482_chromosome | - | 3499436 | 3499545 | 36.58494778 | 51.49775129 | 47.23271525 | 20.53987822 | 16.33575232 | 27.63633955 | 1.025347734  | 3.556800071 | 3.256986344  |
| B7LA63 | TY-2482_chromosome | + | 3499641 | 3500555 | 8660.042226 | 9004.783986 | 8935.021312 | 8848.929445 | 8530.509764 | 8624.736782 | 0.025951481  | 0.036664059 | 0.029028494  |
| B7LA64 | TY-2482_chromosome | - | 3500544 | 3501941 | 7003.732727 | 7287.47502  | 6966.828156 | 7579.923932 | 6749.004145 | 7078.290889 | -0.025345897 | 0.011228338 | 0.008897932  |
| B7LA62 | TY-2482_chromosome | + | 3502218 | 3502919 | 3752.603901 | 3331.722567 | 3652.099681 | 4409.439574 | 4187.947912 | 4206.842281 | -0.225345708 | 0.74078553  | 0.630381664  |
| B7LA66 | TY-2482_chromosome | + | 3502922 | 3503278 | 2759.894331 | 2636.094726 | 2896.236691 | 4039.365026 | 3800.848519 | 4174.059776 | -0.510416733 | 2.285514006 | 2.053365299  |
| B7LA67 | TY-2482_chromosome | - | 3503324 | 3504421 | 1441.538574 | 1389.797606 | 1383.685345 | 2212.991301 | 2375.067637 | 2410.734306 | -0.725598937 | 10.51816166 | 10.00230174  |
| B7LA68 | TY-2482_chromosome | + | 3504790 | 3506631 | 3787.587397 | 4220.308675 | 4170.720704 | 2631.079201 | 2818.487216 | 2506.853005 | 0.597377026  | 2.861473138 | 2.597128327  |
| B7LA65 | TY-2482_chromosome | + | 3506579 | 3507433 | 2856.10291  | 3016.452367 | 3094.56922  | 2155.707679 | 2060.968428 | 2063.761052 | 0.511246442  | 2.776702869 | 2.5168124    |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>E9WNY3</b> | TY-2482_chromosome | - | 3507723 | 3507956 | 271842.1623 | 1236409.584 | 534522.2219 | 1587.349093 | 539.6047535 | 277.3796209 | 9.265769669  | 33.79510473 | 32.97764375  |
| <b>rrsD</b>   | TY-2482_chromosome | + | 3507810 | 3509351 | 1880848.577 | 8276897.378 | 4070401.126 | 2759.972989 | 560.386168  | 161.3700052 | 11.56050715  | 31.60723607 | 30.81744651  |
| <b>Q57H85</b> | TY-2482_chromosome | + | 3508931 | 3509248 | 461649.481  | 2045106.589 | 938430.0323 | 190.490456  | 124.7660634 | 47.74486618 | 12.7855643   | 55.44947172 | 54.4787384   |
| <b>ileT</b>   | TY-2482_chromosome | + | 3509420 | 3509496 | 1070.039366 | 1117.432265 | 613.6906502 | 3575.395987 | 5726.300096 | 5404.599199 | -2.493509588 | 22.65445437 | 21.96690366  |
| <b>alaT</b>   | TY-2482_chromosome | + | 3509539 | 3509614 | 718.1436878 | 597.8568265 | 395.1324867 | 2396.331476 | 3742.694598 | 3596.712326 | -2.541051478 | 43.70849697 | 42.81572325  |
| <b>rrlE</b>   | TY-2482_chromosome | + | 3509798 | 3512701 | 1145886.236 | 12057850.59 | 3229627.838 | 2344.20442  | 818.0529747 | 275.6857297 | 11.49994581  | 31.83952161 | 31.04758207  |
| <b>Q1R3T8</b> | TY-2482_chromosome | - | 3510024 | 3510326 | 187568.7814 | 1540438.317 | 503647.3885 | 296.4630167 | 77.85320908 | 21.81749013 | 11.82889006  | 32.47574825 | 31.6734484   |
| <b>C1HUN3</b> | TY-2482_chromosome | - | 3511384 | 3511587 | 103806.9739 | 1294490.116 | 324588.1802 | 156.8948711 | 49.53003175 | 12.45528014 | 12.18564173  | 32.08450117 | 31.28822949  |
| <b>C1HUN1</b> | TY-2482_chromosome | - | 3511664 | 3512116 | 220400.7858 | 2451062.86  | 610037.7695 | 430.7949726 | 133.9200184 | 43.37837561 | 11.64035735  | 31.49128494 | 30.70363477  |
| <b>C1HUN0</b> | TY-2482_chromosome | - | 3512120 | 3512476 | 163627.5917 | 1645482.784 | 450086.4302 | 548.9447679 | 141.4512845 | 37.72994497 | 10.87911216  | 27.64172357 | 26.89720869  |
| <b>C5WBP6</b> | TY-2482_chromosome | - | 3512759 | 3513082 | 7758.783273 | 29404.57339 | 392.3086784 | 699.8884498 | 71.27827246 | 51.54789935 | 4.598309406  | 7.641687629 | 7.195537605  |
| <b>rrfC</b>   | TY-2482_chromosome | + | 3512795 | 3512914 | 7750.656294 | 29382.29559 | 380.8093092 | 687.5284935 | 53.13660947 | 23.00036901 | 4.698613702  | 6.973672978 | 6.551170301  |
| <b>B7LA70</b> | TY-2482_chromosome | + | 3513215 | 3514240 | 1143.115754 | 1147.804165 | 1362.877909 | 1540.396842 | 1532.103497 | 1421.294617 | -0.268704548 | 2.24988944  | 2.020110988  |
| <b>B7LA71</b> | TY-2482_chromosome | + | 3514240 | 3515202 | 991.9398006 | 839.4625835 | 797.69082   | 1243.700172 | 1243.201075 | 1054.488723 | -0.494121497 | 5.10530594  | 4.738661081  |
| <b>B7LA72</b> | TY-2482_chromosome | - | 3515237 | 3516184 | 829.8717335 | 698.5547074 | 732.9136379 | 1547.494956 | 1652.969635 | 1635.32765  | -1.067106238 | 24.17497157 | 23.46925051  |
| <b>B5Z075</b> | TY-2482_chromosome | + | 3516167 | 3516358 | 211.0889802 | 126.3061996 | 149.8531481 | 213.9426175 | 257.605322  | 299.7595073 | -0.571832829 | 3.368345971 | 3.07865052   |
| <b>thrU</b>   | TY-2482_chromosome | + | 3516546 | 3516621 | 1489.870294 | 1511.701019 | 1128.756579 | 3703.704777 | 4803.541276 | 3297.129308 | -1.576443076 | 14.81912076 | 14.2310991   |
| <b>tyrU</b>   | TY-2482_chromosome | + | 3516630 | 3516714 | 2569.717705 | 2735.703792 | 2408.318064 | 8376.662368 | 10162.58478 | 8362.842666 | -1.83558303  | 8.101185869 | 7.643210874  |
| <b>glyT</b>   | TY-2482_chromosome | + | 3516831 | 3516905 | 3413.590634 | 2949.629168 | 2380.177159 | 9904.082843 | 13080.08891 | 13742.26947 | -2.079911594 | 8.942154599 | 8.462152876  |
| <b>thrT</b>   | TY-2482_chromosome | + | 3516912 | 3516987 | 2748.956195 | 2302.043495 | 2088.224533 | 7771.421687 | 10273.10211 | 10048.28836 | -1.964798843 | 9.15474119  | 8.670249913  |
| <b>B7LA73</b> | TY-2482_chromosome | + | 3517102 | 3518283 | 204109.9727 | 181786.3688 | 194676.9494 | 133354.9731 | 129348.7595 | 132120.6775 | 0.581871966  | 0.846029146 | 0.725131461  |
| <b>B7LA69</b> | TY-2482_chromosome | + | 3518516 | 3518896 | 6276.861911 | 6011.788664 | 5915.185115 | 8096.190851 | 916.2404134 | 8582.854978 | -0.501273414 | 0.960294056 | 2.156846669  |
| <b>B7LA75</b> | TY-2482_chromosome | + | 3518901 | 3519443 | 6980.733804 | 6695.703175 | 6830.256155 | 8665.26881  | 10180.02431 | 10282.53125 | -0.492558984 | 0.942875973 | 0.812098288  |
| <b>A1AIF6</b> | TY-2482_chromosome | - | 3519554 | 3520552 | 173927.755  | 166313.4514 | 178326.8246 | 76888.11156 | 87774.46693 | 80152.51111 | 1.101815581  | 2.343195969 | 2.10728299   |
| <b>D6JHU1</b> | TY-2482_chromosome | - | 3520673 | 3520864 | 37363.0807  | 33719.13479 | 36534.55266 | 17113.05279 | 20431.18557 | 20191.289   | 0.929733825  | 1.885949134 | 1.67959627   |
| <b>B7LA78</b> | TY-2482_chromosome | + | 3521154 | 3521648 | 128469.9834 | 114283.9959 | 128884.5816 | 58369.69895 | 59601.5126  | 56313.79999 | 1.126341572  | 2.396483397 | 2.156846669  |
| <b>E1PAV1</b> | TY-2482_chromosome | - | 3521706 | 3522209 | 96827.93344 | 90394.0817  | 96145.92882 | 40536.71385 | 44508.19643 | 44213.9212  | 1.154398294  | 2.571420291 | 2.321078579  |
| <b>B7LA80</b> | TY-2482_chromosome | + | 3522403 | 3526428 | 90393.12625 | 83838.54251 | 87535.68156 | 35230.95941 | 36163.87985 | 32988.82358 | 1.340477209  | 3.347174854 | 3.057987647  |
| <b>B7LA76</b> | TY-2482_chromosome | + | 3526508 | 3530728 | 156076.5705 | 150885.1861 | 154505.9805 | 71150.56455 | 72068.08352 | 68619.85165 | 1.130218079  | 2.499056048 | 2.25288372   |
| <b>B7LA82</b> | TY-2482_chromosome | + | 3530944 | 3531480 | 214.2946232 | 210.3513096 | 191.4226362 | 262.432941  | 317.0667971 | 328.7332712 | -0.568583552 | 3.852019547 | 3.54131275   |
| <b>B7LA83</b> | TY-2482_chromosome | - | 3531896 | 3533026 | 135.419616  | 158.1742315 | 147.971408  | 107.1528792 | 112.5651973 | 109.0372741 | 0.395208421  | 1.817064901 | 1.615443264  |
| <b>B5Z086</b> | TY-2482_chromosome | - | 3533026 | 3533838 | 123.4536957 | 82.92950476 | 78.33720943 | 76.57368143 | 82.64621459 | 87.29056079 | 0.245718172  | 0.51216613  | 0.427733375  |
| <b>B7LA86</b> | TY-2482_chromosome | - | 3533982 | 3534734 | 79.45690593 | 85.21914462 | 66.60062202 | 59.07910625 | 45.30075305 | 58.31763341 | 0.456183498  | 1.585754403 | 1.40003082   |
| <b>B7LA87</b> | TY-2482_chromosome | - | 3534730 | 3535362 | 56.77103694 | 62.74883275 | 47.88721427 | 51.7576876  | 50.13563476 | 68.64365262 | -0.074847659 | 0.044378184 | 0.03505707   |
| <b>B7LA88</b> | TY-2482_chromosome | - | 3535365 | 3537257 | 237.017579  | 199.851941  | 236.8654076 | 287.8662731 | 253.6606224 | 294.9499408 | -0.263702592 | 1.413778372 | 1.243391361  |
| <b>B7LA89</b> | TY-2482_chromosome | - | 3537493 | 3537966 | 631.2088825 | 678.3879354 | 735.2420354 | 629.5209137 | 577.4698612 | 602.5895907 | 0.182899203  | 0.953478709 | 0.821641624  |
| <b>B7LA85</b> | TY-2482_chromosome | + | 3538061 | 3538831 | 682.9376631 | 674.8727348 | 761.1126139 | 434.853041  | 469.1458431 | 407.4401884 | 0.713266237  | 8.947924219 | 8.467659686  |
| <b>B7LA91</b> | TY-2482_chromosome | + | 3538874 | 3539935 | 4287.485707 | 3920.067206 | 4289.95868  | 2166.35747  | 2057.816477 | 1862.147273 | 1.059554612  | 7.534233318 | 7.090748429  |
| <b>B7LA92</b> | TY-2482_chromosome | + | 3539948 | 3540616 | 1864.301417 | 1764.142607 | 1949.429928 | 1266.196639 | 1281.232176 | 1180.984447 | 0.603381824  | 7.228410603 | 6.796367723  |
| <b>B7LA93</b> | TY-2482_chromosome | + | 3540662 | 3541249 | 2712.860342 | 2668.633224 | 2883.312045 | 1953.441772 | 1989.303974 | 2040.520116 | 0.484125401  | 2.357595443 | 2.120819393  |
| <b>B7LA94</b> | TY-2482_chromosome | + | 3541439 | 3541708 | 27004.93512 | 24813.96289 | 27507.46187 | 23184.69234 | 23037.38264 | 22768.58989 | 0.229531783  | 0.244157374 | 0.199673985  |
| <b>D3GSY0</b> | TY-2482_chromosome | + | 3541718 | 3542416 | 2369.359643 | 2032.877857 | 2305.829734 | 2880.216632 | 2867.619193 | 2787.905283 | -0.30893381  | 1.443190421 | 1.270090272  |
| <b>B2TWI9</b> | TY-2482_chromosome | - | 3542424 | 3542987 | 120.9230035 | 97.09626739 | 91.03380093 | 150.5159036 | 146.788699  | 144.878093  | -0.505385668 | 2.289785437 | 2.057339675  |
| <b>B7LAV0</b> | TY-2482_chromosome | + | 3543084 | 3544457 | 945.1743848 | 1109.251183 | 1140.431666 | 820.2131961 | 674.7343652 | 647.5989301 | 0.55671817   | 6.231319952 | 5.827082363  |
| <b>B7LAU9</b> | TY-2482_chromosome | + | 3544457 | 3545779 | 953.8559497 | 1459.780237 | 1139.541678 | 1109.810182 | 1025.530995 | 1117.961182 | 0.024384791  | 0.44522542  | 0.371447209  |
| <b>B7LAV2</b> | TY-2482_chromosome | - | 3545782 | 3547068 | 1660.801371 | 1578.362319 | 1518.875844 | 802.7131644 | 825.8399257 | 675.0539627 | 1.038756216  | 22.65333359 | 21.96620637  |
| <b>B7LAV3</b> | TY-2482_chromosome | - | 3547083 | 3548669 | 1439.571249 | 1285.88827  | 1301.869574 | 1252.652529 | 1367.415173 | 1272.33061  | 0.064220624  | 0.121371082 | 0.1173849532 |
| <b>D6JHW4</b> | TY-2482_chromosome | - | 3548745 | 3548945 | 13.89708798 | 10.86927928 | 6.277758536 | 31.78031333 | 44.02808581 | 55.9978092  | -2.105392287 | 7.227055151 | 6.795369941  |
| <b>E9WNY3</b> | TY-2482_chromosome | - | 3549197 | 3549430 | 271663.3742 | 1234354.176 | 534737.7262 | 1529.685332 | 446.8820507 | 258.5131043 | 9.368987554  | 33.36306066 | 32.54844752  |
| <b>rrsD</b>   | TY-2482_chromosome | + | 3549284 | 3550825 | 1879548.306 | 8285785.882 | 4067383.997 | 2767.58035  | 550.6913418 | 168.7367446 | 11.55815121  | 31.77503065 | 30.98416744  |
| <b>Q57H85</b> | TY-2482_chromosome | + | 3550405 | 3550722 | 460040.3987 | 2045439.823 | 937582.3626 | 185.9775272 | 129.8886895 | 56.71085203 | 12.74968361  | 57.7269764  | 56.73456553  |
| <b>ileT</b>   | TY-2482_chromosome | + | 3550894 | 3550970 | 1074.410356 | 1030.4473   | 553.4846526 | 3647.311322 | 5638.887092 | 5429.028086 | -2.557514719 | 23.14915439 | 22.45691776  |
| <b>alaT</b>   | TY-2482_chromosome | + | 3551013 | 3551088 | 689.0081366 | 611.6619194 | 363.6770511 | 2452.293816 | 3717.442237 | 3589.313604 | -2.611297745 | 43.52936603 | 42.63727142  |
| <b>rrlE</b>   | TY-2482_chromosome | + | 3551272 | 3554175 | 1134736.395 | 11907300.07 | 3177905.557 | 2798.089327 | 921.5828465 | 234.124981  | 11.26720721  | 29.46714601 | 28.70286459  |
| <b>Q1R3T8</b> | TY-2482_chromosome | - | 3551498 | 3551800 | 188462.715  | 1537549.634 | 503230.736  | 300.3676348 | 81.70911415 | 21.80636912 | 11.8003254   | 32.47029805 | 31.66854969  |

|        |                    |   |         |         |             |              |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| C1HUN3 | TY-2482_chromosome | - | 3552858 | 3553061 | 179133.4079 | 2259512.229  | 554781.1323 | 245.1698445 | 66.6911426  | 15.4339121  | 12.38690901  | 30.36243834 | 29.58688922 |
| C1HUN1 | TY-2482_chromosome | - | 3553138 | 3553590 | 192688.72   | 2143184.255  | 530284.886  | 667.9493361 | 197.1690776 | 42.73919514 | 10.85858567  | 26.80598442 | 26.07102535 |
| C1HUN0 | TY-2482_chromosome | - | 3553594 | 3553950 | 163627.593  | 1653871.077  | 448333.6364 | 534.1089892 | 147.1104635 | 29.43871355 | 10.91404465  | 26.74405841 | 26.01004346 |
| Q1R8D8 | TY-2482_chromosome | - | 3554154 | 3554478 | 10383.01222 | 51731.08874  | 6170.927725 | 684.6241808 | 83.57709045 | 55.71319635 | 5.548181194  | 13.15765605 | 12.59750201 |
| rrfC   | TY-2482_chromosome | + | 3554269 | 3554388 | 7649.956644 | 29687.16353  | 403.8072139 | 659.6154624 | 47.66975494 | 23.46304735 | 4.764055176  | 7.127719041 | 6.7001233   |
| B7LAV4 | TY-2482_chromosome | - | 3554507 | 3554947 | 114.1774751 | 122.3061475  | 127.6766042 | 154.7971181 | 159.2046912 | 179.5750175 | -0.434003432 | 1.978673619 | 1.765268075 |
| B7LAV1 | TY-2482_chromosome | + | 3555104 | 3556030 | 91.97378696 | 71.31784167  | 79.17363931 | 102.9773643 | 110.395149  | 112.9573139 | -0.385259061 | 1.47168609  | 1.296507352 |
| B7LAV5 | TY-2482_chromosome | + | 3556302 | 3557900 | 260.1293257 | 179.0518093  | 188.7236661 | 130.4750338 | 127.4133424 | 130.7543606 | 0.740890723  | 4.362400409 | 4.028864388 |
| B7LAV7 | TY-2482_chromosome | + | 3557933 | 3559234 | 420.413944  | 304.6643682  | 429.0847692 | 230.2942841 | 226.9262656 | 184.7033072 | 0.929325927  | 7.956278872 | 7.502281416 |
| A7ZUM9 | TY-2482_chromosome | + | 3559306 | 3559539 | 111.6975152 | 55.103885    | 72.32973308 | 49.2081459  | 59.0260058  | 45.97387983 | 0.73494211   | 2.059834882 | 1.84171103  |
| B7LAV8 | TY-2482_chromosome | + | 3559518 | 3561251 | 183.6716649 | 187.9827472  | 176.8917058 | 144.0654023 | 157.0942712 | 126.394759  | 0.339941933  | 1.559047437 | 1.37677909  |
| C8UKR4 | TY-2482_chromosome | - | 3561226 | 3562797 | 3.763060767 | 8.586845572  | 7.065240478 | 15.50271189 | 36.75060663 | 42.85164255 | -2.35684153  | 5.858516002 | 5.464731953 |
| B7LAV9 | TY-2482_chromosome | - | 3563117 | 3563938 | 796.2308465 | 772.4814303  | 744.4347994 | 1600.970895 | 1592.031404 | 1527.781293 | -1.034422222 | 23.3742659  | 22.64304318 |
| B7LAW1 | TY-2482_chromosome | + | 3564138 | 3567818 | 4705.810993 | 5318.640526  | 4899.36368  | 4174.42425  | 3966.347907 | 3353.522611 | 0.338522035  | 0.711811737 | 0.605404697 |
| B7LAW2 | TY-2482_chromosome | + | 3568041 | 3569669 | 2315.706841 | 2058.845672  | 2169.528807 | 1706.360254 | 1520.355835 | 1516.658747 | 0.483371074  | 4.560143956 | 4.2173209   |
| B7LAW3 | TY-2482_chromosome | - | 3569766 | 3570452 | 1188.080739 | 1124.69341   | 1203.880152 | 3303.525984 | 2632.950231 | 2551.700271 | -1.260841172 | 24.3433439  | 23.63451914 |
| B7LAW0 | TY-2482_chromosome | + | 3570664 | 3571533 | 1596.417835 | 1623.710008  | 1759.719987 | 1429.162825 | 1527.278144 | 1394.210701 | 0.207180821  | 1.153775356 | 1.004504041 |
| B7LAW5 | TY-2482_chromosome | - | 3571540 | 3571809 | 1331.348342 | 1441.50925   | 1303.354322 | 925.569515  | 909.4309707 | 991.4924748 | 0.501828474  | 6.693918913 | 6.277359306 |
| D8EA79 | TY-2482_chromosome | - | 3572133 | 3572327 | 9.935403644 | 8.209129462  | 12.66974268 | 23.00742955 | 17.86726094 | 22.75099057 | -0.981554215 | 1.84829984  | 1.644597247 |
| B7LAW6 | TY-2482_chromosome | + | 3572338 | 3573462 | 85.26634278 | 99.53832194  | 107.3547224 | 114.1987363 | 107.5672851 | 113.7618122 | -0.202296571 | 0.536126414 | 0.44867618  |
| B7LAW7 | TY-2482_chromosome | + | 3573462 | 3574259 | 165.4615028 | 169.1603884  | 137.0621575 | 196.2986829 | 196.7908259 | 193.2494393 | -0.355097536 | 1.329627916 | 1.166013915 |
| B7LAW4 | TY-2482_chromosome | - | 3574301 | 3575230 | 101.717028  | 126.14497935 | 133.1708067 | 165.9193456 | 216.0617384 | 190.0742566 | 0.672930914  | 3.714645953 | 3.408540524 |
| B7LAW9 | TY-2482_chromosome | - | 3575372 | 3576718 | 1529.306891 | 1494.637938  | 1448.405046 | 1344.22821  | 1124.10945  | 1373.281834 | 0.217754078  | 1.41334377  | 1.243085534 |
| B7LAX0 | TY-2482_chromosome | + | 3577243 | 3578889 | 19514.04459 | 19467.58497  | 20741.89076 | 12678.29195 | 11717.84587 | 11430.5291  | 0.746386089  | 1.480318464 | 1.304357682 |
| B7MRF8 | TY-2482_chromosome | - | 3579231 | 3579518 | 102.5753846 | 109.7588337  | 103.5321933 | 52.01839458 | 48.07147289 | 62.3702675  | 0.945115829  | 5.752976755 | 5.361555927 |
| B7LAX2 | TY-2482_chromosome | + | 3579603 | 3580238 | 25.17269567 | 42.07770975  | 30.29450107 | 30.20114598 | 30.07418941 | 31.86370286 | -0.026258028 | 0.066494083 | 0.052346432 |
| B7LAX4 | TY-2482_chromosome | + | 3580975 | 3583068 | 85.96983594 | 79.51962934  | 81.96311553 | 77.5155817  | 74.63258662 | 90.82478549 | 0.0427374    | 0.035457874 | 0.027910841 |
| B7LAX6 | TY-2482_chromosome | - | 3583121 | 3583396 | 28.60317477 | 20.03948097  | 21.79965865 | 30.21738473 | 20.46864562 | 41.42653068 | -0.334155975 | 0.620315046 | 0.522981225 |
| B7LAX3 | TY-2482_chromosome | + | 3583666 | 3584073 | 193.4031528 | 230.2004501  | 157.427761  | 58.55351649 | 49.02870171 | 69.90383592 | 1.624132123  | 17.20033145 | 16.58051369 |
| B7LAX8 | TY-2482_chromosome | - | 3584123 | 3585595 | 203.0323126 | 181.6150876  | 205.3035594 | 238.7357602 | 234.6042419 | 268.8815016 | -0.29424317  | 1.491048069 | 1.313911576 |
| B7LAX9 | TY-2482_chromosome | - | 3585970 | 3586857 | 2886.872975 | 2907.034501  | 3126.093862 | 3700.320119 | 6579.698243 | 6573.152251 | -1.16765731  | 4.178274662 | 3.83383123  |
| B7LAX7 | TY-2482_chromosome | - | 3586875 | 3588416 | 7355.282895 | 8198.506794  | 8341.444001 | 13055.43502 | 11648.84921 | 11895.16924 | -0.626608832 | 1.210449948 | 1.057234956 |
| B7LAY1 | TY-2482_chromosome | - | 3588573 | 3589760 | 24659.9528  | 26175.67492  | 25463.19979 | 27472.13027 | 24382.90948 | 22914.08299 | 0.010932168  | 0.029365098 | 0.023320357 |
| B7LAY2 | TY-2482_chromosome | + | 3590125 | 3591237 | 14736.76874 | 14272.07145  | 13769.83676 | 20109.22229 | 16175.38876 | 16250.09375 | -0.306253955 | 0.406460304 | 0.337391385 |
| B7LAY3 | TY-2482_chromosome | + | 3591312 | 3592649 | 19697.42732 | 19449.44847  | 18910.39817 | 34946.43586 | 32517.13371 | 30970.01771 | -0.769625926 | 1.477748403 | 1.020484859 |
| B7LAY4 | TY-2482_chromosome | + | 3592804 | 3593721 | 6025.027209 | 5828.571329  | 5831.780251 | 14793.36977 | 13522.29365 | 12275.93903 | -1.20106306  | 3.525170232 | 3.22691529  |
| B7LAY0 | TY-2482_chromosome | + | 3594205 | 3595530 | 35.95711998 | 35.15326506  | 40.03360312 | 70.35688207 | 133.8746488 | 107.4114944 | -1.457602832 | 7.795541188 | 7.346954039 |
| B7LAY7 | TY-2482_chromosome | + | 3595756 | 3596250 | 829.7047285 | 927.9287312  | 1015.296707 | 804.2698358 | 684.8348589 | 831.4219603 | 0.264900622  | 1.631534523 | 1.442327991 |
| B7LAY8 | TY-2482_chromosome | + | 3596266 | 3597135 | 1543.052899 | 1677.861813  | 1789.829706 | 1407.235398 | 1373.090997 | 1491.900676 | 0.235889206  | 1.441733049 | 1.268892026 |
| B7LAY9 | TY-2482_chromosome | - | 3597296 | 3599716 | 4020.786026 | 3587.043841  | 3897.801992 | 9667.339284 | 9529.338857 | 9194.080215 | -1.276713733 | 4.463760948 | 4.125132164 |
| B7LAY6 | TY-2482_chromosome | + | 3599887 | 3600252 | 617.0941487 | 521.2989625  | 570.420434  | 563.1676943 | 544.1363306 | 537.0966958 | 0.088271571  | 0.233975493 | 0.192086635 |
| B7LAZ0 | TY-2482_chromosome | + | 3600365 | 3600970 | 7998.782338 | 8560.749528  | 8910.377371 | 8705.349657 | 8544.590101 | 9537.69135  | -0.068867886 | 0.085517494 | 0.067850346 |
| B7LAZ2 | TY-2482_chromosome | + | 3600992 | 3602389 | 1343.862226 | 1240.957667  | 1264.434626 | 1510.896806 | 1552.527758 | 1580.583846 | -0.256899777 | 2.09887009  | 1.877716768 |
| D3GT26 | TY-2482_chromosome | + | 3602482 | 3602694 | 1448.196496 | 1508.961373  | 1369.493819 | 501.8973991 | 628.3642522 | 584.3206073 | 1.315652021  | 34.06765333 | 33.24732571 |
| B7LAZ1 | TY-2482_chromosome | - | 3602742 | 3603254 | 2371.147338 | 2207.674063  | 2277.273049 | 1853.709067 | 1579.742934 | 1650.261709 | 0.441843238  | 3.982920105 | 3.665760609 |
| D6I3T6 | TY-2482_chromosome | + | 3603572 | 3604560 | 7.21742308  | 16.49186898  | 11.46453073 | 14.81470076 | 34.7337316  | 38.49765953 | -1.424112365 | 2.739760122 | 2.480976135 |
| B7LAZ7 | TY-2482_chromosome | + | 3604927 | 3605961 | 1295.678292 | 1301.748698  | 1414.917761 | 3220.447659 | 3661.075729 | 3438.091331 | -1.345822319 | 15.11632309 | 14.52240307 |
| B7LAZ8 | TY-2482_chromosome | + | 3605888 | 3606337 | 140.4585422 | 164.7693663  | 165.0058591 | 406.6936271 | 533.9838826 | 509.475258  | -1.635386726 | 25.07277885 | 24.35496217 |
| B7LAZ9 | TY-2482_chromosome | - | 3606509 | 3607489 | 2607.561463 | 2647.327673  | 3092.731443 | 1762.041963 | 1648.082017 | 1605.057702 | 0.760671387  | 9.95065641  | 9.445784736 |
| B7LB00 | TY-2482_chromosome | + | 3607572 | 3608984 | 2450.933538 | 2384.15744   | 2387.924465 | 4009.879989 | 4140.573451 | 3705.641786 | -0.714602563 | 3.940540123 | 3.625002813 |
| B7LB01 | TY-2482_chromosome | + | 3609040 | 3610116 | 2676.303073 | 2221.897318  | 2453.96768  | 1730.646504 | 1692.615535 | 1685.81279  | 0.562877891  | 5.606239918 | 5.19925032  |
| B7LAZ6 | TY-2482_chromosome | + | 3610372 | 3611562 | 3244.169603 | 3156.825854  | 3248.432285 | 2717.078177 | 2380.849643 | 2475.309832 | 0.355251185  | 1.330051716 | 1.166310895 |
| Q0SX2  | TY-2482_chromosome | + | 3612452 | 3613402 | 1784.265988 | 1489.810216  | 1792.762398 | 3041.255147 | 2050.832103 | 2156.174055 | -0.474555168 | 3.753248753 | 3.446262225 |
| B7LB05 | TY-2482_chromosome | + | 3613516 | 3613929 | 1673.363818 | 1393.342569  | 1469.957622 | 1579.079725 | 1401.589873 | 1403.41182  | 0.075899966  | 0.19859178  | 0.160984454 |
| B7LB06 | TY-2482_chromosome | + | 3613936 | 3614289 | 1181.30135  | 1064.214397  | 1124.992472 | 1215.052022 | 1053.07385  | 1154.671571 | -0.001543805 | 0.064717489 | 0.051198534 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7LB07 | TY-2482_chromosome | - | 3614330 | 3617149 | 4563.920059 | 4445.438487 | 4518.542522 | 8884.783239 | 8305.695281 | 7774.023138 | -0.882395236 | 2.36485553  | 2.12687728  |
| B7LB08 | TY-2482_chromosome | + | 3617403 | 3617936 | 3345.108371 | 3241.536485 | 3590.121299 | 4041.739946 | 4143.837352 | 4581.723287 | -0.299658604 | 1.055991946 | 0.915224571 |
| D3GT41 | TY-2482_chromosome | - | 3618041 | 3618418 | 558.8727457 | 599.9362335 | 456.2045575 | 553.1727485 | 721.0194067 | 833.5288861 | -0.431122673 | 2.24725901  | 2.017922239 |
| B7LB02 | TY-2482_chromosome | + | 3618749 | 3620332 | 396.2386362 | 483.662584  | 569.5093648 | 189.6205466 | 167.5213707 | 168.6991225 | 1.471607019  | 22.70634385 | 2.01836923  |
| B7LB11 | TY-2482_chromosome | - | 3620341 | 3620661 | 325.1853423 | 318.4641306 | 340.362634  | 233.4196912 | 246.2362007 | 216.4004809 | 0.510410441  | 3.7747867   | 32.67447231 |
| B7LB12 | TY-2482_chromosome | + | 3620747 | 3621208 | 256.949436  | 280.2264943 | 247.3911125 | 201.219793  | 204.5915863 | 220.8163147 | 0.293400474  | 1.582564894 | 1.397374678 |
| D3GT45 | TY-2482_chromosome | + | 3621198 | 3621461 | 140.0675503 | 137.0220099 | 71.88435984 | 67.74956621 | 76.09422519 | 76.59209541 | 0.566058321  | 2.277796171 | 2.046092667 |
| ryJA   | TY-2482_chromosome | - | 3621205 | 3621344 | 123.8611826 | 120.8380544 | 64.63382958 | 44.01755461 | 53.10312358 | 53.67185969 | 0.944900923  | 4.594933107 | 4.250959093 |
| B6I5T1 | TY-2482_chromosome | - | 3621505 | 3621720 | 169.3602877 | 130.8102322 | 118.5016341 | 129.2992143 | 178.2277328 | 167.8766467 | -0.163834008 | 0.467498011 | 0.389255329 |
| Q8FAZ7 | TY-2482_chromosome | + | 3621641 | 3621853 | 225.4024054 | 206.2534129 | 191.4764262 | 166.1987985 | 227.0183508 | 240.6491089 | -0.17498293  | 0.048818983 | 0.038519027 |
| B7LB13 | TY-2482_chromosome | + | 3621757 | 3623103 | 904.0733792 | 976.5512606 | 963.9947527 | 472.5528392 | 618.7635906 | 585.8625489 | 0.756579571  | 10.72522448 | 10.20361984 |
| B7LB10 | TY-2482_chromosome | + | 3623257 | 3624903 | 5916.07686  | 5474.972036 | 5854.616568 | 5420.393986 | 4793.164537 | 5082.101423 | 0.192635764  | 0.251785002 | 0.206336728 |
| B7LB15 | TY-2482_chromosome | - | 3625063 | 3626352 | 18.23116854 | 21.53873987 | 21.44576065 | 30.1351739  | 51.99453228 | 61.61561737 | -1.23101952  | 3.799036539 | 3.49045951  |
| B7LB16 | TY-2482_chromosome | - | 3626533 | 3628179 | 483.8952897 | 420.3958943 | 448.3324501 | 434.6327258 | 448.4303325 | 326.1572373 | 0.178502796  | 0.659506445 | 0.557609013 |
| B7LB17 | TY-2482_chromosome | - | 3628179 | 3628490 | 121.8660027 | 74.47379181 | 83.83357559 | 91.47789555 | 82.00844863 | 62.4733279  | 0.30372935   | 0.601365608 | 0.507209037 |
| B7LB14 | TY-2482_chromosome | - | 3628693 | 3630648 | 1146.282635 | 1211.276825 | 1264.115901 | 774.4206163 | 801.5521831 | 423.7011462 | 0.839744734  | 7.513502227 | 7.071464184 |
| B7LB19 | TY-2482_chromosome | + | 3631040 | 3632521 | 7612.693733 | 6576.83773  | 7338.737038 | 2232.58222  | 18967.90143 | 20221.72678 | -1.481059309 | 4.829834912 | 4.474803226 |
| B7LB20 | TY-2482_chromosome | + | 3632569 | 3633132 | 1398.09107  | 1466.293177 | 1476.888146 | 1740.144803 | 6531.137116 | 7238.773272 | -0.27883886  | 16.46085807 | 15.85044658 |
| B7LB21 | TY-2482_chromosome | + | 3633132 | 3633800 | 824.3712975 | 861.1995892 | 884.8944713 | 6844.894432 | 6295.600725 | 6243.452765 | -2.917359022 | 44.6939107  | 43.79290366 |
| B7LB18 | TY-2482_chromosome | + | 3633800 | 3634753 | 438.1332089 | 530.7093196 | 535.5869721 | 6958.671161 | 6847.95367  | 6827.386626 | -3.797317254 | 66.5322718  | 65.46746568 |
| B7LB23 | TY-2482_chromosome | + | 3634836 | 3636491 | 117.1034321 | 100.3450426 | 131.6960613 | 1559.82206  | 1627.152569 | 1443.769079 | -3.671205727 | 157.6942542 | 156.1863113 |
| B7LB22 | TY-2482_chromosome | + | 3636487 | 3636867 | 20.12849718 | 26.45821012 | 27.04236184 | 168.6915268 | 268.1209938 | 147.1434231 | 0.123233662  | 27.60085426 | 26.68730447 |
| B7LB25 | TY-2482_chromosome | + | 3636867 | 3637460 | 63.52975511 | 62.56195788 | 67.40293042 | 308.0268634 | 416.2596975 | 320.8273074 | -2.420672288 | 36.14606926 | 35.30992607 |
| B7LB26 | TY-2482_chromosome | + | 3637805 | 3639115 | 2800.919595 | 2928.706434 | 3163.365449 | 3907.090557 | 3845.39727  | 3552.82696  | -0.339458981 | 1.15058922  | 1.0015632   |
| B7LB27 | TY-2482_chromosome | - | 3639199 | 3639885 | 884.3093628 | 915.7174091 | 880.8218231 | 822.6645966 | 832.4601883 | 841.1429084 | 0.092007797  | 0.490873786 | 0.409389695 |
| B7LB28 | TY-2482_chromosome | - | 3639982 | 3642126 | 2392.91982  | 2582.272741 | 2581.710479 | 6167.647961 | 5688.359703 | 5832.477045 | -1.237221578 | 6.098605257 | 5.698528548 |
| B7LB29 | TY-2482_chromosome | - | 3642327 | 3643790 | 65.03441987 | 66.29575317 | 63.32730746 | 85.14388682 | 82.18854672 | 79.42288144 | -0.356236505 | 0.977199976 | 0.842762318 |
| B7LB24 | TY-2482_chromosome | - | 3643790 | 3645838 | 127.4904545 | 81.75698529 | 114.796428  | 95.98828114 | 85.68058979 | 112.6346297 | 0.239070096  | 0.359360825 | 0.297373501 |
| B7LB31 | TY-2482_chromosome | - | 3645841 | 3646869 | 60.63102851 | 46.36156795 | 39.45739675 | 51.51059933 | 49.80136038 | 50.59044678 | -0.050542206 | 0.048345694 | 0.038134814 |
| B7LB32 | TY-2482_chromosome | - | 3647375 | 3649357 | 106.9267972 | 100.365108  | 93.68819901 | 58.50531285 | 59.52633612 | 60.82042395 | 0.744311734  | 3.828068583 | 3.519137317 |
| B7LB30 | TY-2482_chromosome | + | 3649610 | 3649924 | 10.12004492 | 19.51925069 | 9.018161506 | 19.01473329 | 22.800192   | 10.35146882 | -0.620758973 | 0.490456499 | 0.409182263 |
| D7XTI2 | TY-2482_chromosome | - | 3650105 | 3650485 | 173.5782006 | 179.611808  | 141.4332107 | 116.4448281 | 121.4529026 | 112.5484267 | 0.448017023  | 2.310618183 | 2.076982166 |
| B7LB33 | TY-2482_chromosome | - | 3650475 | 3651230 | 211.3575884 | 122.5348823 | 168.18623   | 160.5822363 | 142.5474809 | 162.2725963 | 0.212689181  | 0.314802362 | 0.260276471 |
| B7LB36 | TY-2482_chromosome | - | 3651235 | 3651666 | 117.0942555 | 96.03471366 | 134.4574509 | 117.987055  | 112.9258005 | 127.3897128 | 0.033491683  | 0.03471796  | 0.027259441 |
| B7LB37 | TY-2482_chromosome | - | 3651656 | 3652210 | 40.95335481 | 33.76483026 | 52.50492096 | 42.73777952 | 43.35920439 | 50.63648759 | -0.016928701 | 0.110257402 | 0.087852781 |
| B7LB38 | TY-2482_chromosome | - | 3652213 | 3653346 | 47.42131444 | 43.05996952 | 57.00692513 | 40.74040105 | 44.07547502 | 58.06111998 | 0.107484902  | 0.066889581 | 0.052652041 |
| D3GTX6 | TY-2482_chromosome | - | 3653346 | 3654065 | 27.5875674  | 33.7665753  | 22.04191993 | 30.78761256 | 38.45174047 | 29.47019679 | -0.334726581 | 0.363628567 | 0.300435427 |
| B7LB39 | TY-2482_chromosome | - | 3654958 | 3655800 | 37.22482101 | 34.46515092 | 34.59047181 | 27.13137149 | 34.59036345 | 36.81299146 | 0.119356409  | 0.137956075 | 0.111502059 |
| B7LB42 | TY-2482_chromosome | - | 3655796 | 3656857 | 35.50552946 | 39.88890773 | 26.45114676 | 41.4201997  | 41.04219639 | 53.73525564 | -0.488308199 | 0.883652691 | 0.758156235 |
| B7LB44 | TY-2482_chromosome | - | 3657441 | 3657890 | 27.51291576 | 27.3932373  | 24.62292954 | 27.17949427 | 21.71211306 | 17.19931891 | 0.233604188  | 0.365797367 | 0.302302248 |
| B7LB45 | TY-2482_chromosome | - | 3657894 | 3658616 | 30.96189848 | 15.6995468  | 15.03299876 | 30.97667939 | 39.09824847 | 34.43523952 | -0.697618574 | 1.61764063  | 1.429240339 |
| B7LB41 | TY-2482_chromosome | - | 3658640 | 3659479 | 23.24689171 | 24.32822058 | 31.17354043 | 38.18394389 | 39.4764757  | 38.60802247 | -0.531745237 | 1.196509198 | 1.044036379 |
| B7LB46 | TY-2482_chromosome | - | 3659525 | 3660538 | 28.94473346 | 20.96937679 | 27.24601294 | 22.00274242 | 31.78118422 | 26.12665183 | 0.01070552   | 0.023816918 | 0.018565409 |
| B7LB48 | TY-2482_chromosome | - | 3660566 | 3661351 | 22.60477938 | 18.98756092 | 21.55790835 | 20.10722221 | 37.70610024 | 22.90714147 | -0.325671868 | 0.512187254 | 0.427733375 |
| B7LB49 | TY-2482_chromosome | - | 3661487 | 3661927 | 129.4033057 | 91.57569276 | 123.3460988 | 160.2275354 | 223.3987421 | 226.2154139 | -0.734245534 | 4.754392153 | 4.402861631 |
| B7LB50 | TY-2482_chromosome | - | 3662090 | 3662569 | 1290.479413 | 1288.638141 | 1244.36409  | 1875.450038 | 1941.819243 | 2082.647019 | -0.628697119 | 8.130973497 | 7.671497483 |
| B7LB47 | TY-2482_chromosome | + | 3662824 | 3665049 | 1168.855992 | 1274.789956 | 1156.783435 | 10981.00588 | 10734.51054 | 12057.38648 | -3.25500077  | 21.54190216 | 19.62460529 |
| B7LB52 | TY-2482_chromosome | + | 3665049 | 3665924 | 667.333676  | 844.8604573 | 784.3561229 | 16206.73299 | 13790.90689 | 16751.93772 | -4.386883518 | 31.00581943 | 30.2239988  |
| B7LB53 | TY-2482_chromosome | + | 3666191 | 3667690 | 10022.83676 | 8376.985685 | 9137.664923 | 22829.04627 | 24864.48824 | 25463.10163 | -1.370143516 | 4.164688482 | 3.841162252 |
| B7LB54 | TY-2482_chromosome | - | 3667873 | 3668961 | 1898.342262 | 1953.515941 | 1763.197747 | 1403.991806 | 1390.343346 | 1499.728123 | 0.3663791    | 3.467800727 | 3.173504114 |
| B7LB51 | TY-2482_chromosome | - | 3668974 | 3669639 | 1817.048653 | 1735.116017 | 1800.213885 | 991.3304562 | 928.7174452 | 973.2620918 | 0.899117768  | 18.56096466 | 17.92489589 |
| B7LB56 | TY-2482_chromosome | - | 3669639 | 3671279 | 544.588338  | 550.1948686 | 550.2851477 | 470.0372548 | 646.245619  | 589.475169  | -0.04783658  | 0.167244513 | 0.134925966 |
| B7LB57 | TY-2482_chromosome | - | 3671386 | 3672720 | 114.5170865 | 141.170694  | 134.9021323 | 203.3551659 | 184.6874816 | 195.1795449 | -0.610692537 | 3.290131561 | 3.003644989 |
| B7LB58 | TY-2482_chromosome | - | 3672860 | 3673663 | 228.045351  | 286.7563005 | 224.5441813 | 300.6610337 | 265.7766937 | 257.396641  | -0.235768737 | 0.617819462 | 0.521170365 |
| B7LB59 | TY-2482_chromosome | - | 3673991 | 3676258 | 305.5145944 | 319.6881715 | 280.521793  | 368.8895808 | 361.7977314 | 402.7370292 | -0.350208844 | 1.931776722 | 1.722475767 |



|        |                    |   |         |         |             |             |             |             |             |             |              |              |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| B7LB60 | TY-2482_chromosome | - | 3676457 | 3677362 | 582.0312549 | 599.6307552 | 591.9603208 | 706.9576127 | 567.0851062 | 473.9476165 | 0.001875912  | 0.05195039   | 0.040847918 |
| B7LB55 | TY-2482_chromosome | + | 3677645 | 3678997 | 329.5417909 | 301.5566895 | 296.204218  | 281.7055628 | 318.4752319 | 292.6578737 | 0.061385825  | 0.171973028  | 0.138842905 |
| B7LB62 | TY-2482_chromosome | + | 3679115 | 3680521 | 215.0992406 | 252.1674837 | 234.1961575 | 260.224906  | 287.740282  | 323.8447813 | -0.338672352 | 1.571237471  | 1.387244942 |
| B7LB63 | TY-2482_chromosome | + | 3680666 | 3681292 | 237.2751852 | 233.8713275 | 232.8217738 | 150.5635385 | 145.5198219 | 143.0036199 | 0.678969763  | 5.323219743  | 4.946750651 |
| B7LB64 | TY-2482_chromosome | - | 3681418 | 3683061 | 545.0354968 | 573.6582446 | 638.9248464 | 1307.083933 | 1126.674151 | 1130.349934 | -1.009187993 | 19.05422497  | 18.41361649 |
| B7LB65 | TY-2482_chromosome | - | 3683142 | 3684479 | 698.6957693 | 672.7623644 | 653.9050256 | 637.3111762 | 637.492297  | 554.9659951 | 0.107311322  | 0.509800479  | 0.42579019  |
| B7LB66 | TY-2482_chromosome | - | 3685053 | 3685769 | 1302.310098 | 1377.823643 | 1430.791446 | 939.7686258 | 928.5714285 | 907.7099427 | 0.566170345  | 7.951549918  | 7.497799853 |
| B7LB67 | TY-2482_chromosome | - | 3685769 | 3687397 | 1807.682392 | 1818.492463 | 1988.147898 | 1413.040504 | 1302.007379 | 1444.905269 | 0.450325561  | 4.22419898   | 3.89736172  |
| B7LB61 | TY-2482_chromosome | + | 3687578 | 3687805 | 449.9535359 | 703.2295345 | 524.7190489 | 155.2289086 | 154.3899234 | 151.8063532 | 1.745583648  | 31.38848194  | 30.60296067 |
| Q1R3D4 | TY-2482_chromosome | - | 3687852 | 3688244 | 674.4276534 | 903.1673028 | 997.7164735 | 318.4834575 | 349.395228  | 330.4672239 | 1.358287013  | 23.99493024  | 23.29053258 |
| B7LBS9 | TY-2482_chromosome | + | 3688319 | 3688612 | 548.3658237 | 641.0646078 | 604.8342816 | 745.9383703 | 737.4055548 | 964.2522254 | -0.467384793 | 3.657261842  | 3.35448839  |
| B7LBT1 | TY-2482_chromosome | - | 3688938 | 3690452 | 7931.390393 | 7219.492989 | 7649.154978 | 10699.78886 | 9923.08813  | 10111.26178 | -0.411105124 | 0.739475707  | 0.629360747 |
| B7LBT2 | TY-2482_chromosome | - | 3690692 | 3692146 | 199.7438069 | 208.0972192 | 174.3193652 | 176.746152  | 174.8895714 | 176.2909931 | 0.103297361  | 0.38768649   | 0.3207542   |
| B7LBT3 | TY-2482_chromosome | - | 3692208 | 3694352 | 186.6099757 | 191.3257865 | 155.7347781 | 243.2603947 | 231.1739416 | 266.0648199 | -0.509280273 | 2.664211728  | 2.409200138 |
| B7LBT4 | TY-2482_chromosome | - | 3694435 | 3695766 | 21.14184972 | 21.86528933 | 20.22207044 | 36.81474503 | 46.55324348 | 44.33222999 | -1.029164889 | 2.916002587  | 2.648769956 |
| B7LBT5 | TY-2482_chromosome | - | 3696135 | 3697670 | 271.7658237 | 302.7741826 | 278.8415757 | 271.3562024 | 274.1182463 | 311.2616679 | -0.029144325 | 0.028581296  | 0.022712954 |
| D7ZE65 | TY-2482_chromosome | + | 3697957 | 3698280 | 52.46470853 | 67.14604432 | 54.77519576 | 91.41769218 | 91.14925984 | 129.3010788 | -0.888668767 | 3.69673952   | 3.39239095  |
| B7LBT7 | TY-2482_chromosome | - | 3698422 | 3698261 | 321.5637885 | 339.8784939 | 266.4623309 | 144.7632719 | 156.5066964 | 165.128715  | 0.944074891  | 10.00125911  | 9.494714927 |
| B7LBT9 | TY-2482_chromosome | - | 3699566 | 3700051 | 75.11664148 | 78.58344977 | 84.54920458 | 68.47222825 | 69.13110154 | 71.92187382 | 0.192612649  | 0.429036742  | 0.357820629 |
| B7LBU0 | TY-2482_chromosome | - | 3700051 | 3700530 | 32.76447465 | 37.34915491 | 34.5152724  | 71.24714206 | 70.74214462 | 93.97645042 | -1.191323814 | 5.409609975  | 5.030233113 |
| E9TQB2 | TY-2482_chromosome | - | 3700452 | 3700598 | 12.26509474 | 23.12663402 | 19.89408333 | 30.36100637 | 30.78487664 | 47.31989852 | -1.036686746 | 2.275916794  | 2.044361589 |
| B7LBT6 | TY-2482_chromosome | - | 3701732 | 3702583 | 365.7907044 | 362.2169513 | 374.9274517 | 368.3027508 | 335.8751452 | 332.5836549 | 0.093074305  | 0.324867487  | 0.268237823 |
| B7LFP9 | TY-2482_chromosome | + | 3702958 | 3703528 | 1375.383962 | 1412.213338 | 1511.194754 | 1277.390181 | 1242.795141 | 1230.458316 | 0.205665401  | 1.344174148  | 1.179454232 |
| Q9S110 | TY-2482_chromosome | - | 3703461 | 3703829 | 1107.396601 | 1194.485824 | 1261.165776 | 1380.900164 | 1285.868354 | 1299.969454 | -0.154409155 | 0.89860038   | 0.772034635 |
| P71290 | TY-2482_chromosome | - | 3703747 | 3704052 | 625.9956597 | 634.3698713 | 667.9192895 | 911.2210502 | 940.8305284 | 923.9337448 | -0.517211583 | 6.316493572  | 5.908921238 |
| B7LBU5 | TY-2482_chromosome | + | 3704123 | 3705643 | 3060.335953 | 2715.868543 | 3121.779453 | 3650.880174 | 3593.599178 | 3368.733353 | -0.218287605 | 0.732047633  | 0.622940366 |
| Q327G0 | TY-2482_chromosome | + | 3705721 | 3706218 | 455.7942728 | 419.3970816 | 625.1944384 | 421.5528115 | 447.490656  | 427.5845188 | 0.293523369  | 0.961996977  | 0.829334125 |
| B7LBY5 | TY-2482_chromosome | + | 3706374 | 3710489 | 13732.81005 | 14559.67265 | 14350.04784 | 9308.031779 | 9312.714426 | 7939.987976 | 0.667748347  | 1.376391807  | 1.20844502  |
| B3IA48 | TY-2482_chromosome | - | 3710589 | 3710897 | 484.2699304 | 457.7416336 | 482.7004129 | 457.6793873 | 388.1877392 | 378.8737362 | 0.272827789  | 1.133754797  | 0.986441972 |
| Q5K5W0 | TY-2482_chromosome | - | 3710927 | 3711566 | 201.9404781 | 243.8640271 | 198.6185467 | 324.2785621 | 336.2193537 | 323.9869503 | -0.673027576 | 4.886900354  | 4.529268155 |
| B7LBW1 | TY-2482_chromosome | + | 3711654 | 3712775 | 596.6852775 | 585.5523346 | 640.5481827 | 645.9396704 | 624.8687621 | 571.3212571 | 0.0336072884 | 0.0236468237 |             |
| D7JSS3 | TY-2482_chromosome | - | 3713556 | 3714080 | 199.2548346 | 187.4523024 | 154.3913329 | 219.2376654 | 262.3782599 | 239.7973994 | -0.440011404 | 2.057766905  | 1.839930475 |
| Q327G0 | TY-2482_chromosome | + | 3714068 | 3714463 | 119.7151455 | 94.2015277  | 109.208968  | 128.6438122 | 144.827528  | 153.2426215 | -0.348634482 | 1.485370772  | 1.308887845 |
| B7LBV5 | TY-2482_chromosome | + | 3714497 | 3715636 | 775.1540133 | 750.7060676 | 741.4840993 | 1057.289584 | 1086.869512 | 1263.047633 | -0.579918049 | 7.152445883  | 6.723684251 |
| B7LBX6 | TY-2482_chromosome | + | 3715685 | 3715882 | 180.9557755 | 249.0893602 | 165.9416718 | 129.7911054 | 144.2942217 | 130.996911  | 0.438137882  | 2.505941455  | 2.39931945  |
| B7LBV3 | TY-2482_chromosome | - | 3715875 | 3716069 | 202.7102828 | 198.1034433 | 165.7922912 | 157.7512487 | 151.8448482 | 180.1049866 | 0.185688472  | 0.662330529  | 0.560213033 |
| B7LBU8 | TY-2482_chromosome | + | 3716376 | 3717299 | 183.9821309 | 225.8067442 | 171.4846331 | 137.1918411 | 199.0536297 | 176.4704238 | 0.110164173  | 0.445219958  | 0.371447209 |
| B7LBV1 | TY-2482_chromosome | + | 3717255 | 3718445 | 528.9152552 | 446.7045723 | 417.1827443 | 463.7620795 | 469.3232446 | 512.2960073 | -0.042432419 | 0.159430314  | 0.12832841  |
| B7LBV0 | TY-2482_chromosome | + | 3718518 | 3720302 | 1696.149019 | 1469.384432 | 1451.424696 | 631.9938058 | 612.7841408 | 655.2971385 | 1.296562047  | 34.01858567  | 33.19883289 |
| B7LBU9 | TY-2482_chromosome | + | 3720306 | 3721250 | 1077.341316 | 970.1605752 | 1050.203022 | 434.0559973 | 468.7342311 | 406.0510593 | 1.265997071  | 31.16242153  | 30.37901877 |
| B7LBU4 | TY-2482_chromosome | + | 3721253 | 3722992 | 1896.430379 | 1767.951307 | 1737.223475 | 880.1836565 | 937.3639573 | 830.5774669 | 1.030620318  | 23.94411985  | 23.24060221 |
| B7LBU7 | TY-2482_chromosome | + | 3722992 | 3724326 | 4310.091137 | 4401.914729 | 3619.764628 | 3285.809357 | 3272.33514  | 3483.013947 | 0.259011985  | 0.900889225  | 0.773740926 |
| B7LBU6 | TY-2482_chromosome | + | 3724251 | 3726527 | 4540.950496 | 4478.352649 | 3775.009128 | 2140.651859 | 2179.45132  | 2174.371622 | 0.96083323   | 7.016302326  | 6.591492072 |
| Q327G0 | TY-2482_chromosome | - | 3726923 | 3727420 | 293.9668816 | 230.7887355 | 316.964923  | 353.6399864 | 368.3930457 | 379.0507509 | -0.306275217 | 2.062059521  | 1.843786123 |
| B7LB68 | TY-2482_chromosome | - | 3727498 | 3729018 | 3071.782726 | 2738.30645  | 3202.165726 | 3651.718962 | 3583.125163 | 3323.105199 | -0.190122469 | 0.627493012  | 0.529537765 |
| P71290 | TY-2482_chromosome | + | 3729089 | 3729394 | 800.9499255 | 677.9672826 | 795.7435313 | 956.0096774 | 879.252872  | 883.2707844 | -0.212879613 | 1.648747686  | 1.45792417  |
| Q9S110 | TY-2482_chromosome | + | 3729312 | 3729680 | 1177.371323 | 1192.717261 | 1463.309823 | 1353.680246 | 1288.876414 | 1281.232118 | -0.00038023  | 0.117721663  | 0.094308277 |
| B7LFP9 | TY-2482_chromosome | - | 3729613 | 3730183 | 1302.553318 | 1363.566332 | 1595.602393 | 1228.166014 | 1246.725696 | 1204.202213 | 0.237205703  | 1.39698618   | 1.227885206 |
| C8UC10 | TY-2482_chromosome | - | 3730444 | 3730692 | 428.1234179 | 387.5889639 | 309.7488814 | 188.6150811 | 191.3098677 | 192.4447028 | 0.948304909  | 10.58681639  | 10.06895445 |
| B7LBY1 | TY-2482_chromosome | + | 3730692 | 3731114 | 565.2358193 | 569.173271  | 467.5698467 | 410.6468868 | 344.2150256 | 394.2219594 | 0.441298416  | 3.702183904  | 3.397133444 |
| B7LBY2 | TY-2482_chromosome | - | 3731345 | 3732256 | 109.2634249 | 129.0558591 | 110.828393  | 135.797073  | 162.8324477 | 153.8360472 | -0.418030441 | 1.518993581  | 1.340284505 |
| B7LBY3 | TY-2482_chromosome | - | 3732346 | 3733023 | 282.6615915 | 291.9013824 | 251.8526383 | 168.7916583 | 205.1853271 | 199.5573668 | 0.499849134  | 3.344415829  | 3.055397904 |
| B7LBX6 | TY-2482_chromosome | + | 3733358 | 3734818 | 375.3280401 | 357.1025767 | 364.979314  | 344.8014591 | 316.6553126 | 303.4678994 | 0.190467669  | 0.854061184  | 0.731666923 |
| B7LBY5 | TY-2482_chromosome | - | 3735644 | 3739498 | 32679.40671 | 35585.16932 | 33144.06703 | 17244.33159 | 23682.21509 | 17263.16008 | 0.775471506  | 1.557192136  | 1.375056136 |
| C1J8M7 | TY-2482_chromosome | - | 3739862 | 3740863 | 126.3120372 | 104.3439522 | 116.4138149 | 121.593418  | 132.6169505 | 91.40311613 | 0.033259033  | 0.016849412  | 0.013180034 |

|               |                    |   |         |         |              |             |             |             |             |             |               |             |             |
|---------------|--------------------|---|---------|---------|--------------|-------------|-------------|-------------|-------------|-------------|---------------|-------------|-------------|
| <b>B6ICP6</b> | TY-2482_chromosome | + | 3740848 | 3741264 | 90.42924626  | 90.74067279 | 65.42493491 | 78.36728323 | 84.08307869 | 99.68760943 | -0.135966234  | 0.186016277 | 0.150499532 |
| <b>B7LBV5</b> | TY-2482_chromosome | - | 3741267 | 3741629 | 149.5184893  | 149.8878722 | 145.2282814 | 215.8388696 | 200.5136852 | 229.6198401 | -0.543027345  | 3.166335432 | 2.886362146 |
| <b>E3Y4T4</b> | TY-2482_chromosome | - | 3741563 | 3741827 | 120.5838633  | 144.4384397 | 116.7211344 | 172.399707  | 173.3857777 | 199.4118472 | -0.569390867  | 2.652976634 | 2.398434299 |
| <b>B7LBY9</b> | TY-2482_chromosome | - | 3741972 | 3745485 | 3573.023263  | 4161.999874 | 3724.168425 | 2586.763275 | 2590.134019 | 2672.154389 | 0.506935466   | 2.482913541 | 2.238110198 |
| <b>B7LBZ1</b> | TY-2482_chromosome | + | 3745574 | 3745834 | 169.140155   | 207.5138157 | 141.5776622 | 154.6715088 | 227.611392  | 203.2267139 | -0.26569795   | 0.519342656 | 0.433923328 |
| <b>B7LBZ2</b> | TY-2482_chromosome | - | 3745941 | 3747200 | 494.007501   | 463.5482901 | 492.7439838 | 653.1010864 | 773.8849697 | 826.9529909 | -0.617390698  | 7.149141549 | 6.720613345 |
| <b>B7LBZ3</b> | TY-2482_chromosome | - | 3747267 | 3747512 | 229.4055124  | 210.6495877 | 263.8262065 | 624.5449838 | 778.6578082 | 824.7463166 | -1.604429392  | 30.83831778 | 30.05754871 |
| <b>pheU</b>   | TY-2482_chromosome | - | 3747398 | 3747473 | 74.21511756  | 59.41422627 | 64.79703234 | 270.1907468 | 346.5774883 | 356.9053374 | -2.251600545  | 32.53370594 | 31.73030102 |
| <b>D3GV37</b> | TY-2482_chromosome | - | 3747583 | 3748179 | 1555.388993  | 1323.967978 | 1709.139306 | 1110.857114 | 1080.225917 | 957.9275782 | 0.601637935   | 6.229497797 | 5.825689447 |
| <b>B7LBZ0</b> | TY-2482_chromosome | - | 3748195 | 3749889 | 1259.135506  | 1087.364103 | 1163.819366 | 1778.255429 | 1783.54632  | 1599.342547 | -0.531271966  | 6.733038143 | 6.315796934 |
| <b>B7LBZ6</b> | TY-2482_chromosome | - | 3749868 | 3750203 | 420.4794427  | 364.6848057 | 385.1508888 | 478.8776772 | 483.0736565 | 455.0484916 | -0.252755181  | 1.548727351 | 1.366855923 |
| <b>B7LBZ7</b> | TY-2482_chromosome | - | 3750322 | 3751620 | 12962.81286  | 10250.29661 | 11312.93929 | 16020.72537 | 14072.93046 | 14153.70986 | -0.317826799  | 0.529872069 | 0.443108379 |
| <b>Q8FAM6</b> | TY-2482_chromosome | + | 3751720 | 3753168 | 100794.0726  | 100237.0264 | 106238.8566 | 103165.1459 | 88595.94785 | 91510.07484 | 0.125519059   | 0.121932722 | 0.097876091 |
| <b>B7LBZ5</b> | TY-2482_chromosome | + | 3753111 | 3753984 | 4073.8107541 | 604.7413013 | 528.8012658 | 469.7664616 | 483.7020853 | 423.4963237 | 0.163985793   | 1.030885622 | 0.892878324 |
| <b>B7LC00</b> | TY-2482_chromosome | - | 3754006 | 3755259 | 417.9813148  | 418.4956703 | 456.6256566 | 373.7071124 | 372.8430787 | 396.5954872 | 0.195876859   | 0.864247397 | 0.74023565  |
| <b>A1AJ50</b> | TY-2482_chromosome | - | 3755405 | 3755725 | 5604.218079  | 5666.183656 | 5520.024833 | 970.9110504 | 1017.545847 | 872.3106663 | 2.542636561   | 36.02876397 | 35.19321692 |
| <b>B7LC02</b> | TY-2482_chromosome | + | 3755872 | 3757515 | 42268.61522  | 40800.47728 | 42772.82876 | 6694.436778 | 6593.559957 | 5729.73367  | 2.733626789   | 12.26069943 | 11.71501893 |
| <b>B7LBZ9</b> | TY-2482_chromosome | + | 3757656 | 3758006 | 2539.612091  | 2882.885393 | 3110.066119 | 3393.324041 | 2794.423272 | 2932.829645 | -0.09904839   | 0.22108712  | 0.180441975 |
| <b>B7LC04</b> | TY-2482_chromosome | - | 3758215 | 3759081 | 315.9179215  | 354.4397053 | 361.8333643 | 695.7902811 | 720.6157906 | 820.5372408 | -1.118575801  | 18.77776711 | 18.13943442 |
| <b>B7LC05</b> | TY-2482_chromosome | - | 3759474 | 3760499 | 1134.82167   | 1247.365386 | 1162.42961  | 1752.869577 | 1928.732296 | 1899.16834  | -0.677290068  | 8.601441609 | 8.130282115 |
| <b>B7LC03</b> | TY-2482_chromosome | + | 3760541 | 3761104 | 11479.65001  | 10940.15634 | 11182.11651 | 9395.032834 | 9404.659237 | 9444.27082  | 0.260390234   | 0.352161227 | 0.29137638  |
| <b>A7ZV20</b> | TY-2482_chromosome | - | 3761382 | 3761630 | 6793.535243  | 6063.260889 | 3762.756064 | 878.5523694 | 1246.64962  | 886.8570607 | 2.280479443   | 25.01832019 | 24.30186422 |
| <b>B7LC09</b> | TY-2482_chromosome | + | 3761716 | 3762030 | 1061.463719  | 1178.373967 | 977.4503925 | 696.7280878 | 800.3381853 | 838.3410036 | 0.41904363    | 4.40954698  | 4.073566341 |
| <b>B7LC10</b> | TY-2482_chromosome | - | 3762033 | 3762563 | 2416.877043  | 2340.473319 | 2436.64808  | 679.7816886 | 733.0063605 | 659.4015518 | 1.805133866   | 60.53468605 | 59.5203586  |
| <b>B7LC06</b> | TY-2482_chromosome | - | 3762655 | 3763785 | 460.6265087  | 536.0985711 | 518.5541387 | 780.8592889 | 867.6217818 | 831.9056191 | -0.732987962  | 9.583913481 | 9.089215679 |
| <b>B7LC12</b> | TY-2482_chromosome | - | 3763839 | 3764195 | 3842.774727  | 4132.789389 | 4245.35373  | 3550.002174 | 3493.845252 | 3747.742248 | 0.460962763   | 0.460962763 | 0.384460635 |
| <b>B7LC13</b> | TY-2482_chromosome | - | 3764209 | 3764601 | 5250.194777  | 5494.353926 | 5651.954774 | 4393.620519 | 4093.532909 | 4033.616134 | 0.386704232   | 0.741848733 | 0.631285122 |
| <b>B7LC11</b> | TY-2482_chromosome | - | 3764615 | 3765346 | 12921.58876  | 12756.73001 | 13479.26825 | 8077.186545 | 7388.730045 | 7129.104453 | 0.801188483   | 1.789935898 | 1.59024753  |
| <b>B7LC15</b> | TY-2482_chromosome | - | 3765342 | 3767147 | 42676.7893   | 41451.62234 | 46644.5501  | 20875.11609 | 15938.10378 | 16728.02994 | 1.307287873   | 3.30279007  | 3.015124036 |
| <b>B7LC16</b> | TY-2482_chromosome | + | 3767472 | 3768446 | 644.4498768  | 516.5559223 | 563.3444084 | 1881.613234 | 2345.262165 | 2310.084302 | -1.876919362  | 56.08763418 | 55.11281527 |
| <b>B7LC17</b> | TY-2482_chromosome | + | 3768668 | 3770167 | 244.6732599  | 221.9489671 | 190.2737569 | 513.1090595 | 606.2275603 | 512.4653397 | -1.329378143  | 19.8368893  | 19.18763237 |
| <b>B7LC14</b> | TY-2482_chromosome | + | 3770222 | 3770533 | 100.3525183  | 86.27647443 | 90.6464199  | 142.5566077 | 153.7519932 | 148.6708363 | -0.6590436    | 3.722386628 | 3.415928975 |
| <b>B7LC19</b> | TY-2482_chromosome | + | 3770533 | 3770844 | 174.4618829  | 128.1156447 | 139.6623566 | 150.4603566 | 151.9877876 | 143.3955698 | 0.032378654   | 0           | 0           |
| <b>B7LC20</b> | TY-2482_chromosome | + | 3770879 | 3774199 | 2282.827356  | 1849.987584 | 2030.200203 | 2349.729532 | 2462.0391   | 2329.817132 | -0.17310242   | 1.168141934 | 1.017642063 |
| <b>B7LC21</b> | TY-2482_chromosome | - | 3774224 | 3775189 | 2107.327858  | 1797.748262 | 1810.571912 | 3640.826378 | 4014.386529 | 3661.653548 | -0.966313099  | 7.860086259 | 7.409048231 |
| <b>B7LC22</b> | TY-2482_chromosome | - | 3775289 | 3776338 | 2819.868737  | 2788.698287 | 2683.997317 | 4247.957521 | 4243.387787 | 3642.798956 | -0.560738533  | 2.360489049 | 2.122962014 |
| <b>B7LC23</b> | TY-2482_chromosome | + | 3776433 | 3776975 | 1510.344661  | 1632.145365 | 1619.126105 | 2038.831952 | 2147.311216 | 2060.101148 | -0.401877055  | 3.522430225 | 3.224520922 |
| <b>glyY</b>   | TY-2482_chromosome | + | 3777189 | 3777264 | 2539.868523  | 2426.424844 | 2096.778369 | 8355.710177 | 9931.740553 | 11319.89807 | -2.07888597   | 9.936119686 | 9.431526139 |
| <b>A1AJ71</b> | TY-2482_chromosome | - | 3777203 | 3777469 | 2777.101935  | 2631.969072 | 2251.98906  | 9497.299846 | 11161.50573 | 13154.65995 | -2.153017835  | 9.955983544 | 9.450833566 |
| <b>glyY</b>   | TY-2482_chromosome | + | 3777301 | 3777376 | 1500.284986  | 1217.949984 | 1002.382283 | 4622.994215 | 5339.499517 | 7068.466553 | -2.18664584   | 21.40912993 | 20.74185963 |
| <b>B7LC18</b> | TY-2482_chromosome | - | 3777649 | 3778785 | 2181.221983  | 2042.30334  | 2284.163986 | 1677.161793 | 1814.593317 | 1762.340679 | 0.338268529   | 2.336216611 | 2.10078907  |
| <b>B7LC25</b> | TY-2482_chromosome | + | 3778784 | 3780328 | 1615.25388   | 1393.986365 | 1591.74254  | 1193.734306 | 1224.866153 | 1216.772935 | 0.380662403   | 3.14279556  | 2.863650291 |
| <b>B7LC27</b> | TY-2482_chromosome | + | 3780303 | 3780761 | 572.8378993  | 643.9158611 | 682.0868943 | 565.0361425 | 567.3532742 | 547.2097857 | 0.17429518    | 0.90872843  | 0.780880032 |
| <b>B7LC28</b> | TY-2482_chromosome | + | 3780783 | 3782117 | 2441.241122  | 2433.281266 | 2377.908813 | 2490.5179   | 2639.545876 | 2514.020846 | -0.07998049   | 0.192776974 | 0.156220455 |
| <b>B7LC24</b> | TY-2482_chromosome | + | 3782130 | 3783974 | 4848.212569  | 4507.992766 | 4748.378656 | 4911.458841 | 4805.438211 | 4463.934326 | 0.006769244   | 0.009349232 | 0.007343653 |
| <b>B7LC30</b> | TY-2482_chromosome | + | 3783970 | 3784917 | 15915.16221  | 14757.82169 | 15650.26819 | 8412.799388 | 8342.306379 | 7944.55907  | 0.924711609   | 2.149690071 | 1.925777471 |
| <b>B7LC31</b> | TY-2482_chromosome | + | 3785006 | 3785311 | 12515.19832  | 12173.80135 | 12954.86319 | 8636.671595 | 7583.199495 | 7791.766432 | 0.660535867   | 1.310925465 | 1.148830421 |
| <b>B7LC32</b> | TY-2482_chromosome | + | 3785391 | 3786668 | 11093.00479  | 11061.2698  | 11123.18739 | 11645.51281 | 11767.09439 | 11764.60196 | -0.078398582  | 0.091869459 | 0.072386317 |
| <b>B7LC29</b> | TY-2482_chromosome | + | 3786757 | 3788013 | 14843.66743  | 12770.28997 | 13513.99534 | 13332.85729 | 13303.86639 | 12239.80228 | 0.105536424   | 0.090787512 | 0.071577253 |
| <b>B7LC34</b> | TY-2482_chromosome | + | 3788019 | 3789020 | 11074.11664  | 8639.591638 | 9611.849314 | 8019.356019 | 8066.302068 | 7466.593659 | 0.360416289   | 0.480852205 | 0.400416376 |
| <b>B7LC35</b> | TY-2482_chromosome | + | 3789105 | 3789299 | 144.3489397  | 142.9538103 | 123.9898025 | 157.0855601 | 175.5300584 | 215.0933846 | -0.427326295  | 1.757535894 | 1.559497792 |
| <b>B7LC36</b> | TY-2482_chromosome | + | 3789406 | 3790701 | 24275.55725  | 20343.74004 | 22935.90104 | 17597.43067 | 15496.80391 | 14626.27009 | 0.536812276   | 0.809196934 | 0.691786043 |
| <b>B7LC37</b> | TY-2482_chromosome | + | 3790909 | 3791331 | 1906.348768  | 2844.882214 | 2373.511345 | 1654.091068 | 1693.01403  | 1779.138795 | 0.391999399   | 3.574888704 | 3.274554136 |
| <b>B7LC38</b> | TY-2482_chromosome | + | 3791373 | 3793811 | 14802.42862  | 15633.20173 | 16479.04936 | 17449.45462 | 18473.7272  | 16131.32573 | -0.148836149  | 0.17766119  | 0.143652414 |
| <b>B7LC33</b> | TY-2482_chromosome | + | 3793994 | 3794722 | 1948.711483  | 1814.234477 | 1983.978163 | 3664.225908 | 3965.848809 | 3349.62583  | -0.9122992415 | 7.498248513 | 7.056451143 |

|               |                    |   |         |         |             |             |             |             |             |             |              |              |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|
| <b>B7LC40</b> | TY-2482_chromosome | + | 3794852 | 3795250 | 23.82518371 | 18.4671028  | 17.55061636 | 30.11754122 | 45.77370523 | 38.68207215 | -0.919207865 | 2.482198846  | 2.237701129  |
| <b>B7LC41</b> | TY-2482_chromosome | + | 3795272 | 3795967 | 19.11713805 | 31.67694793 | 36.63064773 | 74.48027419 | 78.1967591  | 91.77254259 | -1.490853782 | 7.594502626  | 7.149355292  |
| <b>B7LC42</b> | TY-2482_chromosome | + | 3796021 | 3796677 | 4.421582775 | 11.77988858 | 19.10058475 | 44.18739524 | 53.30154387 | 48.26366434 | -2.003514577 | 7.947399463  | 7.494390725  |
| <b>B7LC39</b> | TY-2482_chromosome | + | 3797106 | 3797741 | 6.74271284  | 14.25759337 | 4.743912573 | 30.82405904 | 45.49882784 | 43.62585629 | -2.422333621 | 6.98166816   | 6.558935272  |
| <b>B7LC46</b> | TY-2482_chromosome | + | 3797747 | 3798907 | 40.52986211 | 45.90545105 | 56.13964839 | 67.49496238 | 67.49496238 | 96.93382125 | -0.925490845 | 3.056839313  | 2.782792807  |
| <b>B7LC47</b> | TY-2482_chromosome | + | 3798994 | 3800616 | 758.4820617 | 904.8618064 | 997.9161448 | 235.6023504 | 212.5300306 | 164.5953208 | 2.107950996  | 52.59032771  | 51.99083369  |
| <b>B5Z2J4</b> | TY-2482_chromosome | - | 3800739 | 3801023 | 656.5531764 | 655.0782626 | 622.3105976 | 532.9170406 | 353.0858201 | 280.5561344 | 0.699202873  | 5.288356835  | 4.913540626  |
| <b>B7LC49</b> | TY-2482_chromosome | - | 3801163 | 3801489 | 2063.78629  | 1858.259502 | 1915.27981  | 1469.150288 | 1166.654857 | 987.7406165 | 0.692196124  | 7.263661053  | 6.829731984  |
| <b>B7LC50</b> | TY-2482_chromosome | + | 3801671 | 3802417 | 663.5848732 | 731.5751743 | 714.0079613 | 568.8292053 | 532.2456113 | 542.6867421 | 0.342321608  | 2.929130199  | 2.661253214  |
| <b>B7LC45</b> | TY-2482_chromosome | - | 3802420 | 3803172 | 754.4035878 | 772.7513259 | 798.7049141 | 450.9306789 | 428.9642361 | 457.2751991 | -0.802670814 | 12.76271982  | 12.20964165  |
| <b>B7LC52</b> | TY-2482_chromosome | - | 3803283 | 3804344 | 142.4186728 | 228.7580194 | 144.3367022 | 101.9327978 | 99.96880394 | 112.6943222 | 0.565446887  | 3.204885665  | 2.923085167  |
| <b>B7LC53</b> | TY-2482_chromosome | + | 3804699 | 3806093 | 79.6627983  | 97.64125381 | 65.3493747  | 62.59646362 | 61.08838435 | 64.06116364 | 0.275431937  | 0.920888158  | 0.792104536  |
| <b>A1AJ99</b> | TY-2482_chromosome | - | 3806096 | 3806428 | 60.90684896 | 39.85359399 | 50.39879573 | 49.25763233 | 46.39469004 | 35.5260224  | 0.26607718   | 0.384531775  | 0.318005273  |
| <b>B7LC51</b> | TY-2482_chromosome | + | 3806427 | 3806888 | 62.02414821 | 58.78930874 | 71.47381667 | 86.22478083 | 78.23919741 | 59.74539877 | -0.197019073 | 0.459239404  | 0.3829971501 |
| <b>A7ZV67</b> | TY-2482_chromosome | - | 3806914 | 3807579 | 134.2230039 | 92.222749   | 127.6314752 | 159.0927352 | 164.1459867 | 159.1889437 | -0.359314683 | 1.740972597  | 1.544304943  |
| <b>B7LCQ7</b> | TY-2482_chromosome | + | 3807565 | 3808416 | 139.9327982 | 113.7190595 | 167.336125  | 238.9384615 | 237.8126531 | 243.1147747 | -0.688197673 | 5.220408387  | 4.849492745  |
| <b>B7LCQ8</b> | TY-2482_chromosome | + | 3808419 | 3809102 | 143.8950409 | 179.9781009 | 175.0532573 | 225.0855686 | 225.3716153 | 216.1745346 | -0.449126805 | 2.134800289  | 1.912051627  |
| <b>B7LCQ9</b> | TY-2482_chromosome | + | 3809250 | 3809798 | 63.39441603 | 65.67783479 | 60.51332049 | 73.60232046 | 98.3430473  | 94.1998961  | -0.502456015 | 1.644558668  | 1.454274817  |
| <b>B7LCQ6</b> | TY-2482_chromosome | + | 3810478 | 3810870 | 39980.64415 | 30350.40949 | 33652.71964 | 21750.27753 | 28262.24554 | 26789.94008 | 0.492146375  | 0.631767388  | 0.533375884  |
| <b>B7LCR2</b> | TY-2482_chromosome | + | 3810880 | 3811191 | 27452.40642 | 19419.99385 | 23670.1328  | 14130.22566 | 17466.3631  | 16854.85745 | 0.618943549  | 0.887522593  | 0.761771114  |
| <b>B7LCR3</b> | TY-2482_chromosome | + | 3811199 | 3811423 | 24991.84791 | 18696.38729 | 22029.39202 | 11252.70795 | 13404.58855 | 12292.16676 | 0.893598446  | 1.729642981  | 1.533385619  |
| <b>Q8FAI4</b> | TY-2482_chromosome | - | 3811444 | 3811929 | 37643.42886 | 28561.73007 | 31973.15056 | 15008.34426 | 19284.22843 | 18411.90146 | 0.954066251  | 1.868946427  | 1.635971861  |
| <b>B7LCR5</b> | TY-2482_chromosome | - | 3811991 | 3812782 | 118.1960501 | 90.06374351 | 114.753791  | 197.6244843 | 282.8180282 | 227.1667732 | -1.063474934 | 8.884003521  | 8.405837033  |
| <b>C8ULY2</b> | TY-2482_chromosome | - | 3813225 | 3813821 | 59.78924604 | 48.47353465 | 56.02821267 | 79.5053376  | 93.7401104  | 118.5559521 | -0.775181574 | 3.500053559  | 3.20300715   |
| <b>B7LCR8</b> | TY-2482_chromosome | + | 3813844 | 3815049 | 1365.934938 | 1157.750442 | 1076.664346 | 1114.242207 | 1300.372813 | 1237.569534 | -0.011194389 | 0.062200597  | 0.04930943   |
| <b>C8TP27</b> | TY-2482_chromosome | - | 3815190 | 3815825 | 4157.824414 | 4321.468575 | 4252.746787 | 1775.846124 | 1611.65944  | 1.294674336 | 1.294674336  | 11.53011897  | 10.99530395  |
| <b>C1NBA6</b> | TY-2482_chromosome | + | 3815900 | 3816661 | 5093.813305 | 5083.236525 | 4986.996262 | 3253.940888 | 3326.276277 | 3287.546081 | 0.616630989  | 2.521507275  | 2.273635784  |
| <b>B7LCS1</b> | TY-2482_chromosome | + | 3816973 | 3818382 | 1459.793559 | 1596.80924  | 1439.837038 | 1379.199216 | 1615.534559 | 1522.512161 | -0.03489274  | 0.032970185  | 0.025953966  |
| <b>B7LCS2</b> | TY-2482_chromosome | - | 3818433 | 3819092 | 254.5075615 | 205.1376031 | 227.0985469 | 419.8853871 | 365.0373549 | 380.5665104 | -0.72583261  | 7.092981535  | 6.666552165  |
| <b>B7LCS3</b> | TY-2482_chromosome | - | 3819203 | 3820174 | 160.4779403 | 137.0357498 | 148.0531004 | 124.6295402 | 138.8397997 | 184.5712761 | 0.034268055  | 0            | 0            |
| <b>B7LCS4</b> | TY-2482_chromosome | - | 3820276 | 3821133 | 246.7572384 | 219.8714609 | 235.6409542 | 144.187557  | 154.1528977 | 149.1166912 | 0.674563969  | 4.923973567  | 4.564553736  |
| <b>B7LCS6</b> | TY-2482_chromosome | - | 3821734 | 3823674 | 1979.468499 | 1900.717493 | 1865.046168 | 2533.623343 | 2448.795348 | 2362.878262 | -0.355795191 | 2.905673809  | 2.639084577  |
| <b>B7LCS0</b> | TY-2482_chromosome | + | 3823864 | 3824601 | 3367.85102  | 3329.316406 | 3532.768901 | 1777.538308 | 1762.600218 | 1851.809288 | 0.938070797  | 7.768520697  | 7.320910039  |
| <b>B7LCS8</b> | TY-2482_chromosome | - | 3824597 | 3825151 | 1198.257705 | 1319.845499 | 1250.012799 | 1033.114562 | 1019.170968 | 1010.892784 | 0.276196706  | 2.520628859  | 2.272911292  |
| <b>Q8Z151</b> | TY-2482_chromosome | + | 3825410 | 3825679 | 5131.411828 | 5832.896532 | 4770.441562 | 3042.708961 | 3351.000835 | 3030.430768 | 0.683483997  | 2.949816823  | 2.680971511  |
| <b>B7LCT0</b> | TY-2482_chromosome | - | 3825747 | 3827087 | 1168.632133 | 1172.124869 | 1146.615507 | 2986.189484 | 3376.085896 | 3249.889927 | -1.465009164 | 36.8392898   | 35.99471344  |
| <b>B7LCT1</b> | TY-2482_chromosome | - | 3827413 | 3828048 | 1202.872023 | 1163.615298 | 1274.161297 | 1090.169602 | 997.6232783 | 977.5363329 | 0.265347771  | 1.890274164  | 1.683501353  |
| <b>B7LCS7</b> | TY-2482_chromosome | + | 3828254 | 3829984 | 3226.575695 | 3262.412404 | 3489.59807  | 3100.446496 | 3079.473643 | 3050.858363 | 0.123589487  | 0.267378736  | 0.219897199  |
| <b>B7LCT3</b> | TY-2482_chromosome | + | 3829984 | 3833760 | 6294.750637 | 5907.374601 | 6075.98316  | 5493.101166 | 5468.411527 | 5199.297305 | 0.188106534  | 0.257324478  | 0.211392957  |
| <b>B7LCT4</b> | TY-2482_chromosome | + | 3833766 | 3834104 | 1462.836366 | 1418.436076 | 1492.677798 | 1347.575264 | 1307.776862 | 1325.389924 | 0.148436127  | 0.780743211  | 0.666014031  |
| <b>B5Z3I0</b> | TY-2482_chromosome | + | 3834313 | 3834567 | 171.6482638 | 245.8232699 | 192.7481106 | 135.9370707 | 124.2681074 | 105.5796855 | 0.639738289  | 4.250465585  | 3.922704098  |
| <b>B7LCT2</b> | TY-2482_chromosome | + | 3834564 | 3834911 | 262.464365  | 318.7539835 | 305.8771249 | 188.2516904 | 174.3699478 | 172.4061512 | 0.69660028   | 6.072310172  | 5.673106856  |
| <b>B7LCT7</b> | TY-2482_chromosome | - | 3834997 | 3835524 | 22096.45416 | 21638.87784 | 21592.69875 | 11799.99112 | 11909.38759 | 11662.30568 | 0.886595302  | 1.7961007184 | 1.749163086  |
| <b>B7LCT8</b> | TY-2482_chromosome | + | 3835834 | 3836787 | 209.4966283 | 159.3078135 | 232.0994884 | 241.6621565 | 225.9777697 | 225.866852  | -0.118771011 | 0.609586076  | 0.514347556  |
| <b>B7LCT9</b> | TY-2482_chromosome | + | 3837100 | 3838599 | 219.0807266 | 187.731253  | 211.1400743 | 292.6811018 | 244.031691  | 265.0860295 | -0.342251608 | 1.887775908  | 1.681283107  |
| <b>B7LCT6</b> | TY-2482_chromosome | + | 3838616 | 3839635 | 135.4411443 | 112.2521692 | 95.53637296 | 149.4638557 | 161.0111457 | 146.6028552 | -0.419835104 | 1.618660231  | 1.429857006  |
| <b>B7LCU0</b> | TY-2482_chromosome | + | 3839625 | 3840617 | 160.1383563 | 122.459277  | 139.4728389 | 283.6375005 | 247.0113927 | 274.9465052 | -0.884297447 | 7.868431681  | 7.417147804  |
| <b>B7LCU2</b> | TY-2482_chromosome | - | 3840656 | 3841651 | 7168.811611 | 6076.79818  | 6623.363454 | 6772.481034 | 6787.807992 | 6102.353161 | 0.045493812  | 0.016941742  | 0.013180034  |
| <b>B7LCU3</b> | TY-2482_chromosome | + | 3841827 | 3843197 | 3676.598792 | 3585.100621 | 3804.335257 | 4191.900703 | 4040.702103 | 4053.561199 | -0.137814346 | 0.37180886   | 0.307305629  |
| <b>B7LCU1</b> | TY-2482_chromosome | - | 3843354 | 3843902 | 1751.989986 | 1587.415321 | 1788.528739 | 1739.465097 | 1982.00829  | 2025.087441 | -0.126625006 | 0.816763774  | 0.698158491  |
| <b>B7LCU4</b> | TY-2482_chromosome | + | 3843996 | 3845345 | 4472.61928  | 4272.318669 | 4038.953187 | 2040.124339 | 1831.061809 | 1676.082443 | 1.19265952   | 9.708957067  | 9.2110163405 |
| <b>B7LCU6</b> | TY-2482_chromosome | + | 3845531 | 3845914 | 2427.769068 | 2163.747665 | 2196.947625 | 1838.363012 | 1811.817343 | 1792.609976 | 0.33378593   | 2.454107053  | 2.211438589  |
| <b>B7LCU7</b> | TY-2482_chromosome | - | 3845965 | 3846426 | 718.0428558 | 642.0315236 | 676.7572915 | 882.5187189 | 850.12753   | 800.2349706 | -0.295927497 | 2.429644366  | 2.188039418  |
| <b>B7LCU8</b> | TY-2482_chromosome | - | 3846587 | 3848722 | 4805.915059 | 4781.873288 | 4327.81092  | 10383.61603 | 10642.44652 | 9374.717366 | -1.149581322 | 3.374756325  | 3.084382288  |
| <b>B7LCU5</b> | TY-2482_chromosome | - | 3849128 | 3850780 | 39189.93133 | 35901.42547 | 37321.99813 | 35218.45505 | 31908.84038 | 33591.33958 | 0.174490232  | 0.178590985  | 0.144393999  |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7LCV0 | TY-2482_chromosome | - | 3850833 | 3852251 | 42436.15591 | 42249.71713 | 43886.27191 | 47812.74342 | 37117.23305 | 36456.13239 | 0.081991137  | 0.084962823 | 0.067386276 |
| B7LCV1 | TY-2482_chromosome | - | 3852373 | 3853317 | 1817.066455 | 1902.472507 | 1649.796706 | 1059.670791 | 1045.01511  | 1118.024194 | 0.70561034   | 11.81863669 | 11.28022996 |
| B7LCV2 | TY-2482_chromosome | + | 3853696 | 3856389 | 1022.032049 | 951.5549001 | 948.4122968 | 1542.730631 | 2047.678492 | 1872.975121 | -0.890363835 | 14.37424396 | 13.79456475 |
| B7LF78 | TY-2482_chromosome | - | 3856623 | 3857600 | 1186.882285 | 1314.020599 | 1232.795477 | 1525.85682  | 1402.529253 | 1391.941266 | -0.237785513 | 1.467807763 | 1.293149605 |
| Q1R311 | TY-2482_chromosome | + | 3857970 | 3858431 | 11898.45229 | 10125.85187 | 10560.14784 | 9163.253744 | 8966.904058 | 9203.996193 | 0.279839926  | 0.357283111 | 0.296097808 |
| B7LCV5 | TY-2482_chromosome | - | 3858339 | 3858797 | 1284.970618 | 1092.661653 | 1130.914149 | 248.8788219 | 241.3955523 | 263.5873848 | 2.244751941  | 84.98440619 | 83.81117642 |
| B7LCV3 | TY-2482_chromosome | - | 3858813 | 3859745 | 2021.282104 | 1699.019094 | 1824.752463 | 346.841383  | 389.0020452 | 418.5266286 | 2.302235877  | 96.09188996 | 94.87218188 |
| C6UP50 | TY-2482_chromosome | - | 3859752 | 3859940 | 52.63203297 | 71.62964281 | 57.61391766 | 48.07753014 | 32.74732585 | 37.99231083 | 0.534572017  | 1.799080502 | 1.598426575 |
| Q79D60 | TY-2482_chromosome | + | 3859863 | 3860192 | 69.99014732 | 56.58580006 | 81.34025324 | 77.89938658 | 63.13726189 | 72.31767181 | 0.037129348  | 0.01227429  | 0.009656473 |
| B7LCV8 | TY-2482_chromosome | - | 3860167 | 3860559 | 120.1165587 | 125.1410859 | 105.3049386 | 80.61956273 | 107.3625528 | 112.9771148 | 0.193242964  | 0.552039909 | 0.463146277 |
| B7LCV9 | TY-2482_chromosome | - | 3860693 | 3861403 | 193.3276588 | 202.8210597 | 174.2389072 | 283.4139689 | 309.9624864 | 348.2176299 | -0.749901164 | 6.032138144 | 5.634676362 |
| B7LCV6 | TY-2482_chromosome | + | 3861474 | 3862064 | 336.2597347 | 318.0729676 | 320.4951546 | 360.9358192 | 392.7194532 | 422.143544  | -0.258196761 | 1.4269322   | 1.25538449  |
| B7LCW1 | TY-2482_chromosome | + | 3862212 | 3862661 | 423.7736924 | 596.9357085 | 508.627545  | 11610.89845 | 11070.24484 | 11901.0638  | -4.570109565 | 35.72739349 | 34.89362999 |
| C8TP74 | TY-2482_chromosome | + | 3862787 | 3864345 | 38.01559574 | 29.08352906 | 23.60501654 | 715.3912387 | 1129.811101 | 1236.953153 | -5.07408786  | 108.3798716 | 107.1129608 |
| C5W5U6 | TY-2482_chromosome | + | 3864324 | 3864374 | 4.623193329 | 4.586487798 | 1.715491145 | 41.24079845 | 67.83539851 | 82.95436064 | -4.211978036 | 17.46320651 | 16.83865028 |
| B7LCW4 | TY-2482_chromosome | - | 3864452 | 3865453 | 1022.142691 | 1031.420202 | 914.1738902 | 2080.202764 | 2509.92262  | 1903.344456 | -1.157706634 | 19.77115034 | 19.12286862 |
| B7LCW5 | TY-2482_chromosome | + | 3865615 | 3866028 | 3716.71375  | 4866.746755 | 4646.139488 | 3226.502416 | 3130.052309 | 3298.759217 | 0.415459292  | 1.686526939 | 1.493266603 |
| B7LCW6 | TY-2482_chromosome | - | 3866080 | 3866580 | 399.3088993 | 367.2867073 | 340.9079338 | 336.1109154 | 339.691014  | 366.2935919 | 0.086650011  | 0.302643103 | 0.249987264 |
| B7LCW7 | TY-2482_chromosome | + | 3866773 | 3867966 | 25.35869933 | 21.90602705 | 16.32434016 | 43.24824522 | 43.38254159 | 37.78576622 | -1.000059002 | 2.675624332 | 2.420142982 |
| B7LCW8 | TY-2482_chromosome | - | 3868028 | 3870880 | 13032.6023  | 10443.56986 | 10843.30912 | 10418.68578 | 10004.50241 | 8697.312757 | 0.262870929  | 0.321758041 | 0.265750083 |
| Q8Z117 | TY-2482_chromosome | - | 3870883 | 3871362 | 1214.755214 | 1003.305926 | 973.132867  | 1333.341485 | 1353.956637 | 1181.232512 | -0.265270633 | 1.897529842 | 1.689915919 |
| B7LCX0 | TY-2482_chromosome | - | 3871460 | 3872968 | 5971.470961 | 5470.778144 | 6268.16717  | 3273.869022 | 6276.953911 | 5770.853394 | 0.045832951  | 0.096208891 | 0.076275061 |
| B7LCX1 | TY-2482_chromosome | + | 3873235 | 3874332 | 3139.191545 | 3455.313067 | 3674.806591 | 2946.025812 | 2684.822902 | 2680.558035 | 0.303913371  | 0.995818252 | 0.859241208 |
| B7LCX2 | TY-2482_chromosome | + | 3874335 | 3875414 | 3206.48807  | 3055.875727 | 2912.533077 | 3627.087021 | 3684.214034 | 3601.927921 | -0.254098893 | 0.725631902 | 0.616971866 |
| B7LCX3 | TY-2482_chromosome | - | 3875539 | 3877038 | 893.0135877 | 994.1651537 | 1059.935602 | 499.7235212 | 556.0495485 | 489.960674  | 0.930466153  | 16.85273479 | 16.23832102 |
| B7LCW9 | TY-2482_chromosome | - | 3877119 | 3878114 | 182.0572229 | 178.7493335 | 182.4673756 | 303.0225195 | 327.5802013 | 304.589877  | -0.778866407 | 7.325268723 | 6.889919616 |
| B7LCX5 | TY-2482_chromosome | - | 3878184 | 3879500 | 366.8262939 | 368.5569428 | 288.1000687 | 322.8685644 | 266.9502256 | 311.8619428 | 0.136919478  | 0.64740802  | 0.547047915 |
| B7LCX6 | TY-2482_chromosome | - | 3879568 | 3880329 | 89.89768196 | 107.6675905 | 97.72778283 | 133.7737321 | 124.6574222 | 110.3507102 | -0.364726823 | 1.092245242 | 0.948338666 |
| B7LCX7 | TY-2482_chromosome | - | 3880356 | 3881384 | 73.86964249 | 54.4306582  | 57.78943426 | 64.69623579 | 70.62615663 | 55.02754067 | -0.000535395 | 0.013327106 | 0.010446638 |
| B7LCX4 | TY-2482_chromosome | + | 3881601 | 3882161 | 61.18032649 | 66.02454275 | 39.71757173 | 48.47367643 | 49.87001278 | 51.66843646 | 0.065193001  | 0.232775605 | 0.190982545 |
| B7LCX9 | TY-2482_chromosome | - | 3882171 | 3883187 | 837.8327101 | 917.8828049 | 1043.927095 | 273.1899564 | 319.8251804 | 292.2396664 | 1.67784532   | 42.97053746 | 42.0824954  |
| B7LCY0 | TY-2482_chromosome | - | 3883265 | 3883468 | 1008.565487 | 1115.84593  | 607.8971913 | 148.4788089 | 188.3069486 | 165.1582103 | 2.321503216  | 44.00377416 | 43.10758884 |
| leuX   | TY-2482_chromosome | + | 3883383 | 3883467 | 1000.332472 | 1083.124185 | 592.1077746 | 146.0498091 | 186.1984848 | 164.7397817 | 2.310545921  | 42.87820965 | 41.99217977 |
| B7LDP4 | TY-2482_chromosome | - | 3883620 | 3884624 | 144.7112745 | 153.4896635 | 138.1626759 | 89.99742094 | 82.00507386 | 104.2505047 | 0.637920904  | 3.603384685 | 3.302702543 |
| B7LDP5 | TY-2482_chromosome | - | 3884536 | 3886152 | 194.5960683 | 169.6954539 | 176.853009  | 156.9078244 | 172.7601853 | 160.9988213 | 0.451266571  | 0.376654702 |             |
| B7LDP6 | TY-2482_chromosome | - | 3886165 | 3887496 | 73.68199008 | 109.5821694 | 66.78806664 | 90.53167214 | 78.87686823 | 84.66180819 | -0.162724813 | 0.076286544 | 0.060337586 |
| B7LDP1 | TY-2482_chromosome | - | 3887456 | 3887779 | 37.96931301 | 50.98651433 | 43.13937103 | 30.75724736 | 24.1039103  | 21.00170422 | 0.72750669   | 2.291803454 | 2.059209089 |
| B7LDP8 | TY-2482_chromosome | - | 3888117 | 3888986 | 515.4709623 | 477.3898085 | 591.3760835 | 316.1591656 | 304.1407103 | 360.1422869 | 0.744752125  | 7.489120051 | 7.04756322  |
| E5ZR87 | TY-2482_chromosome | - | 3889234 | 3889674 | 7.26242403  | 11.48248849 | 15.27304797 | 86.40725981 | 144.3892849 | 105.0519447 | -3.286403794 | 22.78725873 | 22.09758433 |
| E1U309 | TY-2482_chromosome | - | 3889668 | 3890362 | 398.8301111 | 438.7965161 | 466.6066942 | 523.8269553 | 565.2263713 | 591.4368151 | -0.360302391 | 2.614325417 | 2.361810677 |
| B7LDQ2 | TY-2482_chromosome | + | 3891282 | 3891575 | 82.9317921  | 137.4279531 | 131.6258653 | 103.8637173 | 108.6640951 | 111.5437945 | 0.062027041  | 0.215352282 | 0.17518454  |
| B7LDQ3 | TY-2482_chromosome | + | 3891728 | 3891904 | 41.50403733 | 57.43022879 | 54.35795972 | 62.31800642 | 66.74959596 | 53.71891716 | -0.301723712 | 0.536077757 | 0.44867618  |
| B7LDQ3 | TY-2482_chromosome | + | 3892148 | 3892324 | 51.9455358  | 39.61163573 | 57.06753504 | 54.63551739 | 60.05973584 | 61.89260985 | 0.167998366  | 0.474135878 | 0.395059018 |
| B7LDQ4 | TY-2482_chromosome | + | 3892288 | 3892464 | 38.34202795 | 30.05497552 | 29.08222608 | 54.21485895 | 61.43778522 | 75.94590468 | -0.948019547 | 3.641014728 | 3.338939499 |
| B7LDQ7 | TY-2482_chromosome | + | 3892628 | 3893701 | 2426.802321 | 2635.4649   | 2337.861596 | 1881.849931 | 1628.783217 | 1776.623991 | 0.450483882  | 4.709449041 | 4.360063187 |
| B7LDQ8 | TY-2482_chromosome | - | 3893758 | 3894384 | 1402.243281 | 1295.639014 | 1253.111683 | 1168.945617 | 1220.321141 | 1196.03457  | 0.143554136  | 0.804223117 | 0.687329229 |
| E1U309 | TY-2482_chromosome | - | 3894426 | 3895120 | 326.3238223 | 339.8278105 | 260.7946392 | 540.3813543 | 565.6544995 | 685.4875279 | -0.995476248 | 11.24150829 | 10.71084639 |
| B7LDQ5 | TY-2482_chromosome | - | 3895298 | 3896119 | 3234.361429 | 3057.928737 | 3255.548922 | 2088.138825 | 1965.494627 | 2141.894939 | 0.643282668  | 3.862320588 | 3.550672029 |
| B7LDR2 | TY-2482_chromosome | + | 3896246 | 3897838 | 761.6426183 | 700.034486  | 625.5106813 | 1123.177132 | 1051.80796  | 1030.066338 | -0.632118033 | 7.892743966 | 7.44096797  |
| B7LDR3 | TY-2482_chromosome | + | 3897841 | 3898527 | 201.9050884 | 211.5905458 | 222.4968031 | 498.3431391 | 523.5439117 | 390.2569441 | -1.155411773 | 14.34884219 | 13.76949337 |
| B7LDR4 | TY-2482_chromosome | + | 3898591 | 3898803 | 1157.642777 | 1350.030011 | 1145.403934 | 986.3399623 | 1102.603741 | 1259.471599 | 0.083094041  | 0.537108855 | 0.4492815   |
| B7LDR5 | TY-2482_chromosome | + | 3898785 | 3899003 | 684.4926369 | 633.0034472 | 782.4616752 | 511.8999624 | 439.6224104 | 584.6185012 | 0.504638146  | 3.635836257 | 3.341109719 |
| E5ZNX5 | TY-2482_chromosome | + | 3898904 | 3899209 | 564.0389694 | 469.5433784 | 650.0907545 | 502.8648118 | 426.2358279 | 549.4550429 | 0.26891019   | 0.873919341 | 0.749328458 |
| B3IA39 | TY-2482_chromosome | - | 3899580 | 3900001 | 325.5078243 | 354.6157704 | 356.1877952 | 519.2880994 | 522.6697811 | 664.4404379 | -0.719048448 | 7.297740442 | 6.86262833  |
| B7UHC5 | TY-2482_chromosome | - | 3900094 | 3900648 | 300.7657795 | 338.9655158 | 270.6290237 | 274.291703  | 282.3503278 | 290.1645028 | 0.048973798  | 0.284079553 | 0.23426257  |

|               |                    |   |         |         |             |             |             |             |             |             |              |              |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| <b>B7LDS0</b> | TY-2482_chromosome | - | 3900779 | 3901807 | 991.1308018 | 897.2518232 | 936.8140741 | 863.6611343 | 911.5336639 | 885.260014  | 0.106155952  | 0.427485235  | 0.356474075 |
| <b>B7LDS1</b> | TY-2482_chromosome | + | 3902078 | 3902518 | 85.17083519 | 90.94765036 | 108.6414722 | 152.7150335 | 136.8234399 | 145.4524995 | -0.587801228 | 2.966391716  | 2.696737812 |
| <b>B7LDS2</b> | TY-2482_chromosome | + | 3902537 | 3902821 | 121.5253309 | 168.0077036 | 167.648588  | 161.9447221 | 149.2676814 | 175.370413  | -0.120758633 | 0.234940301  | 0.192536176 |
| <b>B7LDR9</b> | TY-2482_chromosome | + | 3902837 | 3904090 | 1028.59713  | 989.2131464 | 948.4833051 | 1144.764989 | 1103.7074   | 1182.896347 | -0.212191252 | 1.410598532  | 1.240469034 |
| <b>B7LDS3</b> | TY-2482_chromosome | - | 3904343 | 3904594 | 167.3020506 | 144.088902  | 174.9899501 | 146.2430953 | 196.3711429 | 174.5115637 | -0.036366201 | 0.179751953  | 0.145366675 |
| <b>B7LDS6</b> | TY-2482_chromosome | - | 3905019 | 3906029 | 523.7826968 | 596.3890213 | 541.782965  | 822.6151917 | 842.9874346 | 848.5193113 | -0.630048819 | 7.518659082  | 7.076139292 |
| <b>B7LDS7</b> | TY-2482_chromosome | - | 3906044 | 3907357 | 307.6206942 | 366.556789  | 307.7601512 | 558.0037384 | 573.1355927 | 588.9544267 | -0.861540315 | 10.10611771  | 9.596771618 |
| <b>B7LDS8</b> | TY-2482_chromosome | - | 3907388 | 3908332 | 209.8755509 | 212.0937673 | 222.5630261 | 294.7164947 | 273.7511259 | 279.8044081 | -0.390663523 | 2.306577659  | 2.073090602 |
| <b>B7LDS4</b> | TY-2482_chromosome | + | 3908608 | 3909390 | 599.8837549 | 646.9977637 | 576.4130404 | 528.2555687 | 523.173901  | 632.8679542 | 0.089995623  | 0.437770198  | 0.364910973 |
| <b>D3GWZ4</b> | TY-2482_chromosome | - | 3909398 | 3909645 | 181.5002928 | 166.9415715 | 151.2946736 | 180.1395985 | 193.6840461 | 219.2848773 | -0.24903151  | 0.893895638  | 0.767911667 |
| <b>C1HR96</b> | TY-2482_chromosome | - | 3909624 | 3909821 | 205.6260734 | 169.9570255 | 169.8786542 | 172.1414395 | 183.1043225 | 176.721571  | 0.056640344  | 0.097999391  | 0.077787719 |
| <b>Q8FKR7</b> | TY-2482_chromosome | + | 3910175 | 3910498 | 129.7100944 | 122.5767528 | 115.2222668 | 103.6662052 | 104.4811496 | 126.8551485 | 0.134567928  | 0.33340456   | 0.27610804  |
| <b>B7LDT2</b> | TY-2482_chromosome | - | 3910580 | 3912190 | 627.0070733 | 594.595124  | 554.9234261 | 878.6557816 | 922.2314937 | 974.9269833 | -0.64705287  | 8.554025089  | 8.084663918 |
| <b>B7LB70</b> | TY-2482_chromosome | - | 3912224 | 3912571 | 110.2564854 | 97.41767855 | 104.9075922 | 240.2410285 | 201.5726874 | 230.7802518 | -1.081766273 | 9.788065572  | 9.287347209 |
| <b>B7LX21</b> | TY-2482_chromosome | - | 3912571 | 3912993 | 264.279447  | 220.5831204 | 231.506629  | 439.2352461 | 354.3855567 | 459.581938  | -0.776202352 | 7.586050111  | 7.141355823 |
| <b>D3GX00</b> | TY-2482_chromosome | + | 3913084 | 3913380 | 216.230754  | 221.5792887 | 212.7525406 | 185.5977406 | 179.4308932 | 183.2009166 | 0.235476427  | 0.988683346  | 0.85353373  |
| <b>B7LDT4</b> | TY-2482_chromosome | - | 3913444 | 3914124 | 1555.720173 | 1584.286891 | 1669.303791 | 866.271783  | 899.0630805 | 977.3276214 | 0.822397923  | 15.3406294   | 14.74169011 |
| <b>E9WYU6</b> | TY-2482_chromosome | - | 3914164 | 3915503 | 1404.913216 | 1667.517073 | 1504.359376 | 1099.94034  | 1071.339571 | 1189.519344 | 0.40796598   | 4.632766635  | 4.286674576 |
| <b>B7LDT5</b> | TY-2482_chromosome | - | 3915686 | 3917686 | 7023.043427 | 6690.847425 | 7054.283056 | 2662.976169 | 2661.033021 | 2757.800984 | 1.378346081  | 5.408336869  | 5.029168352 |
| <b>B7LDT8</b> | TY-2482_chromosome | - | 3917837 | 3918973 | 525.3272874 | 545.07007   | 573.0605355 | 402.2306607 | 446.7873699 | 420.7077838 | 0.37834228   | 2.859944428  | 2.59575949  |
| <b>B7LDT9</b> | TY-2482_chromosome | - | 3919157 | 3920098 | 1057.094059 | 1208.679401 | 1180.88206  | 716.6264361 | 926.0846392 | 955.9127551 | 0.39631809   | 3.299841083  | 3.012512365 |
| <b>B7LDU0</b> | TY-2482_chromosome | - | 3920166 | 3921113 | 1238.926317 | 1268.447956 | 1404.760208 | 646.2359315 | 876.0125826 | 724.856497  | 0.818986776  | 11.508504212 | 10.97428484 |
| <b>B7LDT7</b> | TY-2482_chromosome | - | 3921121 | 3922206 | 1771.771855 | 1773.208912 | 1841.791962 | 1892.709331 | 2546.334636 | 2224.073599 | -0.295904558 | 1.963067835  | 1.750940255 |
| <b>Q9X692</b> | TY-2482_chromosome | - | 3922212 | 3923051 | 2544.181448 | 2923.982656 | 2692.519157 | 3238.373119 | 4067.074029 | 3811.188606 | -0.474175881 | 1.728257498  | 1.532136814 |
| <b>Q6Q6S9</b> | TY-2482_chromosome | + | 3923237 | 3924017 | 292.3102935 | 259.3068995 | 285.8443599 | 358.1524909 | 346.1656398 | 328.389861  | -0.275538238 | 1.569992882  | 1.386398849 |
| <b>P71290</b> | TY-2482_chromosome | - | 3924236 | 3924541 | 781.4776547 | 682.3204925 | 765.6677603 | 905.7290203 | 936.7413552 | 879.5543469 | -0.253629026 | 2.078204823  | 1.858208078 |
| <b>B7LBU5</b> | TY-2482_chromosome | + | 3924612 | 3926132 | 2502.99192  | 2380.100671 | 2538.604156 | 2808.036626 | 2871.20843  | 2592.452873 | -0.141714727 | 0.466568652  | 0.388660456 |
| <b>Q0T2D8</b> | TY-2482_chromosome | + | 3926150 | 3926700 | 250.0535936 | 229.9428674 | 237.1405144 | 447.1947535 | 477.8593665 | 429.1907114 | -0.904839372 | 11.26085533  | 10.72960255 |
| <b>B7LDU8</b> | TY-2482_chromosome | + | 3926630 | 3927040 | 347.6234008 | 343.6696671 | 316.3892019 | 170.9187134 | 166.600381  | 192.9281878 | 0.915431253  | 10.61989611  | 10.10059848 |
| <b>B7LDU9</b> | TY-2482_chromosome | - | 3927604 | 3928368 | 1888.200138 | 1637.560366 | 1780.114757 | 419.2864662 | 412.7789747 | 433.8112568 | 2.100147003  | 88.38085875  | 87.1890892  |
| <b>B7LDV1</b> | TY-2482_chromosome | - | 3928372 | 3929325 | 1976.120519 | 1921.596028 | 1767.539434 | 420.7777861 | 431.7360362 | 364.8907175 | 2.200462944  | 98.5578323   | 97.32533067 |
| <b>B7LDV0</b> | TY-2482_chromosome | - | 3929325 | 3930320 | 2642.295709 | 2379.768613 | 2350.750668 | 420.0522713 | 419.9079478 | 433.7688719 | 2.543808201  | 126.3700815  | 125.0022207 |
| <b>B7LDV3</b> | TY-2482_chromosome | - | 3930320 | 3931219 | 4274.329032 | 4001.190539 | 3942.58918  | 541.5251053 | 540.9128509 | 520.0237248 | 2.933783355  | 88.23714258  | 87.04941301 |
| <b>B7LDV4</b> | TY-2482_chromosome | - | 3931267 | 3933588 | 9319.432317 | 8557.897274 | 8916.393203 | 2096.619142 | 2482.498312 | 2318.958278 | 1.9774767    | 9.620088955  | 9.124030154 |
| <b>B7LDV5</b> | TY-2482_chromosome | - | 3933678 | 3934628 | 588.2391601 | 654.2466028 | 483.5362459 | 109.961206  | 113.7476208 | 112.7773789 | 2.287627502  | 57.5791436   | 56.58756812 |
| <b>B7LDV2</b> | TY-2482_chromosome | - | 3934628 | 3935146 | 616.8878667 | 581.4052604 | 472.0151946 | 158.8678436 | 187.0310639 | 153.7472404 | 1.708026627  | 34.57244711  | 33.7492338  |
| <b>D8A8G4</b> | TY-2482_chromosome | + | 3935519 | 3935830 | 37.40399959 | 28.13468799 | 42.6729804  | 34.48171223 | 58.95583571 | 51.84419602 | -0.332656891 | 0.858043837  | 0.734841586 |
| <b>B3Y1Q0</b> | TY-2482_chromosome | + | 3936028 | 3936318 | 91.93724188 | 118.8345693 | 116.099692  | 78.27030247 | 99.22345198 | 89.28996393 | 0.2637923    | 0.815859172  | 0.697482465 |
| <b>B7LDV7</b> | TY-2482_chromosome | - | 3936487 | 3936693 | 111.2579183 | 107.1982026 | 72.81275728 | 100.5111759 | 127.2617675 | 119.8428214 | -0.309919658 | 0.690314895  | 0.585769317 |
| <b>B7LDV8</b> | TY-2482_chromosome | + | 3937057 | 3938427 | 1227.075476 | 1216.682324 | 1184.007529 | 814.223831  | 782.0754592 | 759.8436378 | 0.615958549  | 9.167939616  | 8.682917092 |
| <b>B7LDV9</b> | TY-2482_chromosome | - | 3938672 | 3940054 | 772.9093452 | 658.6413297 | 655.4769926 | 466.7775631 | 454.1301257 | 409.2269285 | 0.662485266  | 7.632848466  | 7.186941404 |
| <b>Q8XC14</b> | TY-2482_chromosome | - | 3940107 | 3940676 | 65.62729089 | 80.48015297 | 76.04289844 | 24.35499068 | 24.39163134 | 30.95374242 | 1.449365528  | 8.808356731  | 8.332798625 |
| <b>B3Y1Q5</b> | TY-2482_chromosome | - | 3940950 | 3941183 | 37.12825511 | 37.39839317 | 30.54511141 | 26.98500151 | 28.64496774 | 36.12048932 | 0.167318885  | 0.258431688  | 0.212209959 |
| <b>B7LDW2</b> | TY-2482_chromosome | - | 3941186 | 3941704 | 21.57249877 | 20.21863319 | 29.64653048 | 20.40972647 | 26.66869578 | 27.49804474 | 0.001628112  | 0.051100233  | 0.040176226 |
| <b>A7ZV13</b> | TY-2482_chromosome | + | 3941972 | 3942838 | 31.27998504 | 40.4228656  | 33.168418   | 40.98378501 | 36.68834821 | 37.11740486 | -0.194585786 | 0.206960298  | 0.168221629 |
| <b>E3PBJ5</b> | TY-2482_chromosome | - | 3943081 | 3943359 | 149.5728654 | 100.5814072 | 102.6090637 | 96.36306389 | 104.3315878 | 117.959191  | 0.198168829  | 0.36142893   | 0.298680643 |
| <b>Q0TGB3</b> | TY-2482_chromosome | + | 3943821 | 3944082 | 73.26021759 | 73.13240351 | 76.08400681 | 44.9644477  | 42.88254167 | 49.09278976 | 0.706172966  | 2.888009245  | 2.622062461 |
| <b>B7LDW6</b> | TY-2482_chromosome | - | 3944056 | 3944319 | 26.22590432 | 39.99247493 | 20.76337644 | 26.29071562 | 27.44539917 | 43.24692501 | -0.290798427 | 0.186041778  | 0.150499532 |
| <b>B7LDW1</b> | TY-2482_chromosome | + | 3944265 | 3944663 | 42.74409389 | 30.3300369  | 26.47486142 | 45.88935824 | 48.10479785 | 67.4777827  | -0.670240352 | 1.892807097  | 1.685754097 |
| <b>C8TTS1</b> | TY-2482_chromosome | + | 3944606 | 3945360 | 46.15832676 | 35.25611114 | 30.73847915 | 144.4348436 | 196.4395849 | 238.4698802 | -2.345127146 | 21.59443038  | 20.92432022 |
| <b>B7LDW9</b> | TY-2482_chromosome | + | 3945535 | 3945729 | 164.232924  | 121.774952  | 200.1800475 | 495.9256079 | 573.2553051 | 631.1990074 | -1.679293257 | 27.95337742  | 27.20351581 |
| <b>C1HRB5</b> | TY-2482_chromosome | - | 3946219 | 3946431 | 538.0730157 | 912.9330766 | 689.8078261 | 851.1861918 | 850.657744  | 931.6229006 | -0.435386812 | 1.743259804  | 1.546318406 |
| <b>B7LDX0</b> | TY-2482_chromosome | + | 3946564 | 3947238 | 603.2410283 | 678.8065772 | 580.7850086 | 1320.901984 | 1451.804114 | 1581.026389 | -1.262945532 | 27.03895819  | 26.30162981 |
| <b>E1U309</b> | TY-2482_chromosome | - | 3947255 | 3947949 | 372.4094558 | 408.0210812 | 365.1655485 | 1187.854029 | 1233.462856 | 1357.663651 | -1.74898581  | 50.59811436  | 49.65723581 |
| <b>B7LDX4</b> | TY-2482_chromosome | - | 3948351 | 3949691 | 515.9223183 | 385.3187614 | 454.0387941 | 245.1937729 | 266.3757515 | 241.8974031 | 0.904957275  | 9.729208176  | 9.229865469 |

|               |                    |   |         |         |             |             |              |             |             |             |              |             |              |
|---------------|--------------------|---|---------|---------|-------------|-------------|--------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LDX5</b> | TY-2482_chromosome | + | 3949771 | 3950076 | 122.3674736 | 88.51178765 | 92.37120131  | 139.1563463 | 118.4157672 | 115.5832365 | -0.264984591 | 0.854065308 | 0.731666923  |
| <b>B7LDX2</b> | TY-2482_chromosome | + | 3950031 | 3951212 | 696.6421118 | 603.0325397 | 609.4249753  | 799.7014284 | 683.6663935 | 646.7027928 | -0.146840423 | 0.723689272 | 0.615475926  |
| <b>B7LDX7</b> | TY-2482_chromosome | + | 3951296 | 3952753 | 1001.41572  | 718.5112922 | 783.3711397  | 873.3208414 | 867.5265994 | 772.4535207 | 0.041752973  | 0.006246693 | 0.004503236  |
| <b>A8A849</b> | TY-2482_chromosome | - | 3952781 | 3952972 | 349.9872724 | 343.6301575 | 215.3964711  | 196.2502851 | 236.1598374 | 197.1060886 | 0.450446103  | 2.607030683 | 2.354982508  |
| <b>B7LDX8</b> | TY-2482_chromosome | + | 3952971 | 3953741 | 2050.807537 | 1928.412306 | 1840.748847  | 1301.138712 | 1276.23748  | 1347.687461 | 0.568107539  | 6.953597187 | 6.531554568  |
| <b>B7LDX9</b> | TY-2482_chromosome | - | 3953888 | 3954715 | 16.80582159 | 8.520356924 | 7.682451557  | 22.47895438 | 23.38267525 | 25.52748472 | -1.057625791 | 2.162978546 | 1.937988879  |
| <b>B7LDX6</b> | TY-2482_chromosome | + | 3955387 | 3955776 | 199.0959783 | 259.9487219 | 221.3697961  | 357.5656799 | 227.9821718 | 240.4522659 | -0.354049644 | 1.023453285 | 0.885444107  |
| <b>B7LDY2</b> | TY-2482_chromosome | - | 3955775 | 3956683 | 351.2177507 | 370.6259156 | 347.8352797  | 471.8412023 | 401.9000519 | 422.4495262 | -0.298764569 | 1.57562281  | 1.391098384  |
| <b>B7LDY3</b> | TY-2482_chromosome | - | 3956751 | 3957920 | 2499.689571 | 2249.143173 | 2610.243603  | 1563.984628 | 1484.408114 | 1486.425556 | 0.736066323  | 9.610925374 | 9.115574323  |
| <b>B7LDY4</b> | TY-2482_chromosome | - | 3957936 | 3958394 | 363.5371067 | 280.1319757 | 356.0417971  | 182.2718675 | 169.4299024 | 197.9301232 | 0.93403612   | 8.857070331 | 8.976888003  |
| <b>D3GXV1</b> | TY-2482_chromosome | - | 3958394 | 3959086 | 39.99653445 | 40.52935951 | 25.20290474  | 35.33264015 | 31.22782384 | 42.56733395 | -0.112565313 | 0.059704808 | 0.047351024  |
| <b>B7LDY6</b> | TY-2482_chromosome | + | 3959324 | 3959875 | 139.9722806 | 174.4791173 | 121.3731633  | 91.17693869 | 97.10357446 | 113.4465796 | 0.442936529  | 2.14560361  | 1.922139839  |
| <b>B7LDY5</b> | TY-2482_chromosome | + | 3959894 | 3961069 | 291.9338789 | 219.226777  | 279.9416949  | 213.4298564 | 217.0234193 | 251.5027777 | 0.290365544  | 0.913385837 | 0.78495316   |
| <b>C8UOT1</b> | TY-2482_chromosome | - | 3961140 | 3962108 | 193.2646616 | 179.9082557 | 188.2288588  | 188.1701021 | 176.9052501 | 176.1443917 | 0.065507716  | 0.149057102 | 0.119959054  |
| <b>B7LDZ0</b> | TY-2482_chromosome | - | 3962065 | 3962319 | 128.2800848 | 127.3683391 | 119.4655093  | 95.18829432 | 90.11036924 | 87.69661817 | 0.443609499  | 1.958569054 | 1.746866627  |
| <b>B7LDY8</b> | TY-2482_chromosome | - | 3962319 | 3963083 | 141.1634809 | 133.9994113 | 129.5127073  | 273.138088  | 207.158861  | 194.8429691 | -0.750062529 | 4.660151537 | 4.312899813  |
| <b>B7LDZ2</b> | TY-2482_chromosome | - | 3963096 | 3964244 | 253.7957877 | 213.9105329 | 309.4690005  | 733.5054719 | 555.2676108 | 564.3132477 | -1.17950052  | 15.60177754 | 14.99936942  |
| <b>B7LDZ3</b> | TY-2482_chromosome | - | 3964363 | 3965667 | 373.9461318 | 422.3318649 | 341.0046565  | 781.3347684 | 763.9496425 | 647.0091268 | -0.980881155 | 13.29666743 | 12.7347963   |
| <b>B7LDZ1</b> | TY-2482_chromosome | - | 3965684 | 3966913 | 543.2742912 | 598.0984742 | 577.5559133  | 772.0022892 | 677.0796759 | 762.1027646 | -0.380881783 | 2.984613415 | 2.713662625  |
| <b>E9TKV9</b> | TY-2482_chromosome | + | 3967171 | 3967380 | 22.80586829 | 22.74229165 | 23.00186433  | 26.29980512 | 23.6289017  | 46.97867721 | -0.481878584 | 0.831381519 | 0.71105807   |
| <b>B7LDZ5</b> | TY-2482_chromosome | + | 3967380 | 3968333 | 185.789253  | 209.357211  | 205.3551103  | 205.2456598 | 234.7536126 | 238.7625554 | -0.189517225 | 0.620045392 | 0.522961348  |
| <b>C6UPC5</b> | TY-2482_chromosome | - | 3968582 | 3969478 | 327.7000009 | 280.9354232 | 286.1476358  | 284.5605839 | 259.2118862 | 296.8004669 | -0.119883578 | 0.317487635 | 0.294203251  |
| <b>B7LDZ4</b> | TY-2482_chromosome | - | 3969459 | 3969938 | 172.3845373 | 168.3595719 | 179.4743351  | 215.5077575 | 201.8148281 | 185.0357309 | -0.203360896 | 0.735546257 | 0.625655449  |
| <b>Q659X8</b> | TY-2482_chromosome | + | 3970376 | 3972466 | 207.8911249 | 205.1879266 | 192.7596331  | 454.7334855 | 411.2111916 | 442.9368618 | -1.122032403 | 15.21599901 | 14.61912779  |
| <b>B7LQL5</b> | TY-2482_chromosome | - | 3972519 | 3972914 | 79.53570361 | 81.78647155 | 72.13010426  | 128.9022815 | 149.0304223 | 160.7376196 | -0.928821175 | 5.672731917 | 5.28366152   |
| <b>B7LE00</b> | TY-2482_chromosome | - | 3973081 | 3974814 | 1227.52364  | 1417.202634 | 1222.9486078 | 127.8882357 | 1240.644104 | 1141.827669 | 0.160575265  | 1.120542575 | 0.974205694  |
| <b>B7LE01</b> | TY-2482_chromosome | - | 3974817 | 3976319 | 770.572817  | 809.6811406 | 768.7747989  | 1611.361961 | 1995.206627 | 1730.360864 | -1.198501357 | 26.34122963 | 25.61097077  |
| <b>B7LE02</b> | TY-2482_chromosome | - | 3976353 | 3978782 | 4544.59446  | 4874.740487 | 4382.306759  | 4106.134418 | 3702.840555 | 3577.225549 | 0.243976408  | 0.638213318 | 0.538979298  |
| <b>B7LE03</b> | TY-2482_chromosome | + | 3979039 | 3980709 | 2929.172201 | 3011.790773 | 3162.060418  | 1325.85549  | 1991.94024  | 1950.856217 | 0.806124833  | 4.848003393 | 4.491558873  |
| <b>B7LDZ9</b> | TY-2482_chromosome | - | 3980784 | 3981737 | 1033.681799 | 932.5746766 | 1094.456929  | 1507.81269  | 1279.324587 | 1315.950704 | -0.386329768 | 4.012215869 | 3.69397154   |
| <b>B7LE04</b> | TY-2482_chromosome | - | 3981751 | 3982077 | 295.5242937 | 264.3102191 | 283.0471507  | 414.3286167 | 438.1899482 | 429.9880016 | -0.580701832 | 5.526088094 | 5.142102178  |
| <b>B7LE05</b> | TY-2482_chromosome | - | 3982085 | 3984232 | 1178.542507 | 1099.04138  | 1312.711011  | 8030.23527  | 8048.368511 | 8490.5749   | -2.73168513  | 18.31259516 | 17.68064651  |
| <b>B7LE07</b> | TY-2482_chromosome | + | 3984609 | 3986270 | 2922.562608 | 2961.757004 | 3061.569858  | 23409.00783 | 22810.71745 | 22847.79078 | -2.944566624 | 15.29032981 | 14.69208096  |
| <b>B7LE06</b> | TY-2482_chromosome | - | 3986325 | 3987683 | 461.8935454 | 523.456158  | 454.2916183  | 3005.127849 | 3051.98343  | 2829.644205 | -2.670320083 | 103.9225262 | 102.6790965  |
| <b>B7LE08</b> | TY-2482_chromosome | - | 3987901 | 3988812 | 848.2074375 | 796.143377  | 807.5405511  | 652.3668501 | 617.2652649 | 685.33026   | 0.338432983  | 2.776073104 | 2.5163040876 |
| <b>B7LE09</b> | TY-2482_chromosome | + | 3988951 | 3989970 | 36.24198503 | 46.39568214 | 40.26342656  | 47.85303518 | 56.16011345 | 65.16032653 | -0.502696796 | 1.158169119 | 1.008529603  |
| <b>B7LE10</b> | TY-2482_chromosome | - | 3990117 | 3992405 | 902.9487562 | 691.2557592 | 844.649127   | 1734.522992 | 1975.573118 | 1805.000901 | -1.112914226 | 24.28458578 | 23.5770939   |
| <b>C8UN70</b> | TY-2482_chromosome | - | 3992662 | 3993156 | 426.034272  | 281.8058712 | 343.5429193  | 629.2954745 | 746.5007581 | 603.4513999 | -0.8388809   | 9.600850869 | 9.105881208  |
| <b>B7LE12</b> | TY-2482_chromosome | - | 3993205 | 3993939 | 399.7371247 | 389.5096844 | 385.1579414  | 1032.427105 | 1144.753452 | 1013.422247 | -1.442590903 | 36.84139824 | 35.99621319  |
| <b>B7LEK9</b> | TY-2482_chromosome | - | 3993945 | 3994481 | 345.7677734 | 317.8611617 | 306.3120513  | 832.5064023 | 894.8463692 | 848.828369  | -1.406384872 | 31.93300858 | 31.13944955  |
| <b>B7LEL0</b> | TY-2482_chromosome | - | 3994591 | 3995076 | 318.0988063 | 290.1749577 | 279.0315467  | 190.2500389 | 140.4617636 | 209.9474051 | 0.722768148  | 5.449996998 | 5.068949771  |
| <b>D3GY05</b> | TY-2482_chromosome | - | 3995055 | 3995885 | 749.0777051 | 701.875628  | 718.436221   | 428.9750424 | 292.8731278 | 367.4130683 | 1.001296103  | 14.32179072 | 13.74343156  |
| <b>B7LEL2</b> | TY-2482_chromosome | + | 3996443 | 3997165 | 12.30045016 | 10.1617442  | 4.85713114   | 15.29008644 | 28.66841725 | 30.74649069 | -1.492889904 | 2.988390728 | 2.71711511   |
| <b>B5Z4P9</b> | TY-2482_chromosome | + | 3997126 | 3997800 | 87.5687279  | 66.53734409 | 42.88054058  | 38.71666641 | 58.22782267 | 54.17064881 | 0.360374821  | 0.815051222 | 0.696788758  |
| <b>B7LEL4</b> | TY-2482_chromosome | - | 3997844 | 3998629 | 474.3582013 | 565.8017588 | 336.0212185  | 115.4716241 | 132.7741354 | 135.6434369 | 1.724461701  | 25.91624657 | 25.19063759  |
| <b>B7LEL5</b> | TY-2482_chromosome | + | 3998659 | 3999003 | 54.80431569 | 83.03973125 | 75.86702419  | 163.1062428 | 175.3485905 | 154.2990586 | -1.265859171 | 8.847253435 | 8.370393096  |
| <b>leuQ</b>   | TY-2482_chromosome | - | 3999045 | 3999131 | 804.7771574 | 557.2176145 | 353.7836104  | 1388.433311 | 1890.972795 | 1889.531844 | -1.600479713 | 17.23149083 | 16.61094744  |
| <b>leuP</b>   | TY-2482_chromosome | - | 3999166 | 3999252 | 3508.134597 | 2595.13136  | 1740.089915  | 4361.526565 | 7291.493313 | 6102.531726 | -1.193840974 | 4.00383683  | 3.685954414  |
| <b>leuQ</b>   | TY-2482_chromosome | - | 3999281 | 3999367 | 3279.164471 | 2527.277598 | 1665.365141  | 3978.14028  | 7746.702929 | 5676.800406 | -1.244979016 | 5.306416066 | 4.930980762  |
| <b>B7LEL6</b> | TY-2482_chromosome | - | 3999679 | 4000707 | 1258.727415 | 978.7689249 | 1100.634598  | 1799.111179 | 2090.214981 | 1878.632045 | -0.739986467 | 10.33010109 | 9.818217731  |
| <b>B7LEL7</b> | TY-2482_chromosome | + | 4000810 | 4001220 | 534.6257544 | 532.7451415 | 701.6531284  | 1243.344173 | 1398.539054 | 1298.161372 | -1.338520289 | 33.71468073 | 32.98939069  |
| <b>B7LEL8</b> | TY-2482_chromosome | + | 4001192 | 4001635 | 711.7765204 | 658.5551725 | 712.5266531  | 1237.214803 | 1291.270027 | 1246.612561 | -0.834957206 | 15.40676101 | 14.80747607  |
| <b>A7ZVR4</b> | TY-2482_chromosome | - | 4002160 | 4003647 | 2960.956765 | 2723.721419 | 2675.433579  | 2365.906858 | 2690.720418 | 2327.76717  | 0.183966635  | 0.552917361 | 0.463916957  |
| <b>A7ZVR6</b> | TY-2482_chromosome | - | 4004373 | 4005062 | 9878.367681 | 12153.31117 | 13009.02495  | 1252.241578 | 1160.080101 | 909.4984805 | 3.37985897   | 22.10649316 | 21.42775027  |
| <b>B7LEM3</b> | TY-2482_chromosome | + | 4005418 | 4006488 | 411.1056093 | 558.2207328 | 605.5460991  | 366.9784424 | 303.9252109 | 276.3663581 | 0.709482141  | 6.047982572 | 5.65008606   |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LEM4</b> | TY-2482_chromosome | + | 4006488 | 4007267 | 400.5583082 | 459.7172734 | 472.3988577 | 724.9663344 | 656.3373784 | 681.264434  | -0.641635324 | 7.03996024  | 6.614686936 |
| <b>B7LEM5</b> | TY-2482_chromosome | - | 4007503 | 4008363 | 1555.64407  | 1766.436176 | 1441.537142 | 2090.168065 | 1683.636262 | 1796.162313 | -0.285409772 | 1.268923585 | 1.111353792 |
| <b>B7LEM6</b> | TY-2482_chromosome | - | 4008338 | 4009885 | 4994.898694 | 5094.861815 | 5254.016656 | 7459.925547 | 5650.557774 | 5786.452782 | -0.304884149 | 0.491947647 | 0.410148584 |
| <b>B7LEM7</b> | TY-2482_chromosome | + | 4010143 | 4010919 | 1487.147618 | 1381.222119 | 1535.665959 | 4909.158032 | 3857.662521 | 3929.330203 | -1.506617367 | 15.58607759 | 14.98436545 |
| <b>B7LEM8</b> | TY-2482_chromosome | + | 4011000 | 4012319 | 1719.42058  | 1629.232884 | 1645.15309  | 8265.668858 | 6628.411996 | 6664.912949 | -2.110453538 | 11.47578758 | 10.94216322 |
| <b>B7LEM9</b> | TY-2482_chromosome | + | 4012374 | 4013594 | 5744.127092 | 4052.835633 | 4596.355252 | 17161.02726 | 15623.94612 | 15323.97756 | -1.683927976 | 6.376804838 | 5.967896212 |
| <b>B7LEN0</b> | TY-2482_chromosome | + | 4013677 | 4014393 | 7878.877252 | 6388.831249 | 7034.317249 | 14457.76316 | 14224.85525 | 13205.23313 | -0.937948105 | 2.459139785 | 2.21616698  |
| <b>D3GY25</b> | TY-2482_chromosome | - | 4014560 | 4014820 | 174.9788485 | 274.4297242 | 184.4506345 | 178.7061024 | 233.7563824 | 201.0432833 | -0.085533598 | 0.039776946 | 0.031609809 |
| <b>B7LEN2</b> | TY-2482_chromosome | - | 4014855 | 4015868 | 1125.767149 | 1353.909001 | 1436.242634 | 916.7474738 | 834.0717354 | 775.2073372 | 0.618944588  | 7.695873076 | 7.24923672  |
| <b>B7LEN3</b> | TY-2482_chromosome | - | 4015899 | 4016540 | 600.2551639 | 670.2825421 | 655.0763065 | 332.4291383 | 316.5281655 | 335.2463981 | 0.951542352  | 15.98667402 | 15.38076914 |
| <b>B7LEN4</b> | TY-2482_chromosome | + | 4016646 | 4017611 | 1020.86619  | 1028.463112 | 1055.930298 | 882.3844346 | 946.8662276 | 901.3231486 | 0.189862759  | 1.167423535 | 1.017046676 |
| <b>B7LEN5</b> | TY-2482_chromosome | + | 4017663 | 4019042 | 1830.298901 | 1909.965666 | 1837.67277  | 1186.264865 | 1198.826933 | 981.6361865 | 0.709136686  | 10.46438605 | 9.949666011 |
| <b>B7LEN6</b> | TY-2482_chromosome | + | 4019066 | 4020295 | 2099.02438  | 2441.620806 | 2384.83482  | 834.7351249 | 754.9677285 | 774.2092857 | 1.526576556  | 42.80778647 | 41.92242525 |
| <b>B7LEN7</b> | TY-2482_chromosome | - | 4020608 | 4022272 | 11272.85316 | 9914.092618 | 10274.19997 | 6084.81421  | 6178.488932 | 5477.563725 | 0.823740213  | 1.917483576 | 1.709167478 |
| <b>B7LEN8</b> | TY-2482_chromosome | + | 4022483 | 4024417 | 2624.907985 | 2562.188855 | 2613.42263  | 1929.490543 | 1857.954783 | 1809.990597 | 0.483080736  | 4.998410033 | 4.635994368 |
| <b>B7LEN9</b> | TY-2482_chromosome | + | 4024510 | 4024833 | 446.8471877 | 448.9379144 | 414.061156  | 490.9250551 | 527.2392031 | 504.9611579 | -0.233019218 | 1.204265913 | 1.051545844 |
| <b>B5Z4S6</b> | TY-2482_chromosome | - | 4024881 | 4025399 | 438.9226068 | 439.4140664 | 443.9496406 | 514.4286568 | 518.3808154 | 572.650705  | -0.274599479 | 1.751810856 | 1.554184343 |
| <b>B7LEP1</b> | TY-2482_chromosome | + | 4025442 | 4026086 | 1434.347427 | 1128.718765 | 1280.173399 | 1383.21545  | 1317.840165 | 1314.695386 | -0.016324265 | 0.222113451 | 0.181181611 |
| <b>B7LEP2</b> | TY-2482_chromosome | - | 4026089 | 4026955 | 7713.711893 | 7389.840518 | 7407.883946 | 7089.136958 | 6821.771256 | 7156.730988 | 0.101565566  | 0.119163582 | 0.095382723 |
| <b>B7LEP3</b> | TY-2482_chromosome | + | 4027166 | 4027636 | 718.6428613 | 739.1864736 | 757.063856  | 466.7112377 | 476.2452561 | 477.8878703 | 0.642306554  | 8.477321466 | 8.009751203 |
| <b>B7LEP4</b> | TY-2482_chromosome | + | 4027652 | 4028338 | 600.5033    | 672.1788534 | 727.9906238 | 551.8298344 | 516.4429413 | 492.234166  | 0.358138162  | 2.697436425 | 2.441171008 |
| <b>B7LEP5</b> | TY-2482_chromosome | + | 4028341 | 4029762 | 577.4162018 | 636.9392952 | 614.9087184 | 518.0629692 | 547.2706482 | 540.9688555 | 0.17053677   | 0.981338122 | 0.846663275 |
| <b>B7LEP6</b> | TY-2482_chromosome | + | 4029823 | 4031172 | 163.09793   | 186.9579045 | 183.7722625 | 190.6724327 | 180.4596603 | 201.9374899 | -0.118683526 | 0.299467085 | 0.247105783 |
| <b>B7LEP7</b> | TY-2482_chromosome | - | 4031238 | 4031951 | 11943.25112 | 12034.30707 | 12805.38003 | 18581.56685 | 13556.84765 | 13178.53449 | -0.30105256  | 0.414709751 | 0.34467153  |
| <b>B7LEP9</b> | TY-2482_chromosome | + | 4032587 | 4033270 | 434.8643068 | 510.0261591 | 542.6410482 | 643.184554  | 641.9442183 | 643.5765133 | -0.379526601 | 2.823488637 | 2.561376707 |
| <b>B7L4C7</b> | TY-2482_chromosome | + | 4033633 | 4036092 | 2953.368815 | 2956.305413 | 3037.188687 | 1813.559427 | 1448.972266 | 1448.880024 | 1.07038394   | 21.87181948 | 21.19270882 |
| <b>B7L4C8</b> | TY-2482_chromosome | + | 4036097 | 4037026 | 1969.977644 | 1950.916848 | 1998.462087 | 1048.096043 | 1104.632968 | 1036.117684 | 0.897209892  | 16.32785368 | 15.71948422 |
| <b>B7L4C9</b> | TY-2482_chromosome | + | 4037030 | 4038313 | 2754.977328 | 2701.136016 | 2777.174452 | 1970.093593 | 1984.478916 | 1837.036576 | 0.512349755  | 2.712021895 | 2.454970992 |
| <b>A7ZVW4</b> | TY-2482_chromosome | - | 4038609 | 4039017 | 401.6456167 | 460.8354143 | 371.1641299 | 384.9304928 | 387.6388026 | 395.9857715 | 0.020819225  | 0.205739611 | 0.167096046 |
| <b>B7L4D1</b> | TY-2482_chromosome | - | 4038983 | 4039756 | 1460.86136  | 1287.52254  | 1420.851387 | 1243.452848 | 1194.858074 | 1222.744249 | 0.219075681  | 1.257645629 | 1.100825481 |
| <b>B7L4D2</b> | TY-2482_chromosome | - | 4039829 | 4041256 | 1897.402019 | 2288.76802  | 2001.549177 | 1641.947063 | 1127.197604 | 1273.95041  | 0.557071832  | 5.635941608 | 5.248360343 |
| <b>B7L4D3</b> | TY-2482_chromosome | + | 4041535 | 4042485 | 21832.43634 | 18087.47895 | 19171.90323 | 23431.48851 | 22417.542   | 22038.3189  | -0.170253544 | 0.243203073 | 0.198912404 |
| <b>B7L4D4</b> | TY-2482_chromosome | - | 4042603 | 4043187 | 2288.734235 | 2366.667664 | 2405.009003 | 2223.497152 | 2106.6046   | 2187.739059 | 0.114338747  | 0.537269756 | 0.449335891 |
| <b>B7L4D5</b> | TY-2482_chromosome | - | 4043228 | 4043791 | 770.6310488 | 846.5789311 | 753.1107535 | 815.0234651 | 890.4153128 | 945.5674511 | -0.190391577 | 0.91631788  | 0.787768253 |
| <b>B7L4D6</b> | TY-2482_chromosome | - | 4043943 | 4044653 | 72.31462103 | 106.9139272 | 77.89371522 | 78.27145648 | 94.28791858 | 94.18570516 | -0.151705891 | 0.139098444 | 0.112459464 |
| <b>B7L4D7</b> | TY-2482_chromosome | - | 4044682 | 4045083 | 26.86548058 | 43.38844204 | 34.46200875 | 43.56057818 | 41.42362645 | 53.63220898 | -0.485463108 | 0.850867042 | 0.729048997 |
| <b>B7L4D8</b> | TY-2482_chromosome | + | 4045460 | 4047373 | 21110.92748 | 18197.46455 | 18802.67708 | 3271.712689 | 3530.829391 | 2826.878585 | 2.610657282  | 12.59051059 | 12.03991234 |
| <b>B7L4D9</b> | TY-2482_chromosome | + | 4047465 | 4048592 | 3761.322128 | 2899.375414 | 2873.985815 | 743.3639486 | 786.3016283 | 691.9636226 | 2.127549484  | 62.10824796 | 61.07929026 |
| <b>D6I4R4</b> | TY-2482_chromosome | - | 4048702 | 4048941 | 4042.486254 | 2929.864445 | 3251.595773 | 2086.766084 | 2320.205899 | 2327.888537 | 0.659780989  | 3.235586992 | 2.951449778 |
| <b>B7L4E0</b> | TY-2482_chromosome | + | 4049437 | 4050600 | 2527.304451 | 2385.57596  | 2514.234748 | 3883.82843  | 3905.440507 | 3629.779093 | -0.606751251 | 3.106203246 | 2.829532597 |
| <b>B7L4E1</b> | TY-2482_chromosome | + | 4050663 | 4051565 | 551.3648614 | 552.5352989 | 627.4512752 | 1082.8301   | 1057.508503 | 968.1901753 | -0.824383098 | 13.8682815  | 13.29711172 |
| <b>B7L4E2</b> | TY-2482_chromosome | - | 4051610 | 4052566 | 59.82175098 | 33.37967922 | 31.01239007 | 99.82237395 | 107.9693739 | 85.86516105 | -1.194296125 | 6.182618801 | 5.779691373 |
| <b>Q1RG10</b> | TY-2482_chromosome | + | 4055974 | 4056306 | 13832.70108 | 12877.26595 | 11600.66557 | 20711.94509 | 24480.42427 | 23951.1714  | -0.858334284 | 1.804022305 | 1.60309211  |
| <b>B7L4E6</b> | TY-2482_chromosome | + | 4056427 | 4056642 | 591.6334766 | 640.2969258 | 536.369211  | 1076.646744 | 1013.019058 | 1085.70123  | -0.887226288 | 14.00017332 | 13.42672889 |
| <b>B7L4E7</b> | TY-2482_chromosome | + | 4056653 | 4057591 | 3910.668887 | 3955.524677 | 3939.54484  | 4895.824564 | 4711.683609 | 4665.351426 | -0.277468553 | 0.489989781 | 0.408925299 |
| <b>B7L4E8</b> | TY-2482_chromosome | + | 4057637 | 4060450 | 18900.52839 | 16696.66867 | 16835.83156 | 13270.82962 | 12449.73102 | 11868.29035 | 0.492252262  | 0.790107773 | 0.674805125 |
| <b>B7L4E9</b> | TY-2482_chromosome | + | 4060453 | 4060944 | 3953.946165 | 3508.293073 | 3573.332836 | 1717.915866 | 1748.765999 | 1872.667834 | 1.067532073  | 9.455066699 | 8.963348166 |
| <b>B7L4F0</b> | TY-2482_chromosome | + | 4061035 | 4061481 | 2218.396063 | 2193.596159 | 2030.413638 | 1340.1433   | 1323.985203 | 1214.524551 | 0.715124732  | 10.68019026 | 10.15974066 |
| <b>B7L4F1</b> | TY-2482_chromosome | + | 4061486 | 4062433 | 2576.173882 | 2664.781181 | 2444.148381 | 2016.716816 | 1995.623192 | 1968.010555 | 0.340326153  | 2.446104359 | 2.204043937 |
| <b>B7L4F2</b> | TY-2482_chromosome | + | 4062502 | 4063413 | 1296.621831 | 1238.514354 | 1131.11171  | 1998.869558 | 1826.857155 | 1715.814337 | -0.612584749 | 6.898955548 | 6.477602104 |
| <b>B7L4F3</b> | TY-2482_chromosome | + | 4063583 | 4064401 | 2299.052772 | 2675.884833 | 2740.973109 | 1097.064054 | 981.5379903 | 815.2634243 | 1.392854924  | 29.68898334 | 28.92267488 |
| <b>B7L4F4</b> | TY-2482_chromosome | + | 4064860 | 4066005 | 6226.334776 | 6010.387672 | 5500.197293 | 1769.747433 | 2616.485054 | 2398.480472 | 1.381935069  | 10.44401583 | 9.93014874  |
| <b>B7L4F5</b> | TY-2482_chromosome | + | 4066026 | 4069244 | 43266.35316 | 40639.29299 | 41251.49283 | 2602.282183 | 3057.000709 | 2773.677259 | 3.902776922  | 22.08743892 | 21.40952563 |
| <b>B7L4F6</b> | TY-2482_chromosome | - | 4069258 | 4069473 | 407.790862  | 298.5080916 | 263.8237911 | 52.57279194 | 43.33275113 | 41.43056016 | 2.828257487  | 48.36909013 | 47.44313726 |
| <b>C3TRD2</b> | TY-2482_chromosome | + | 4069403 | 4069900 | 758.8677866 | 687.0841468 | 761.3334116 | 729.6133355 | 530.0870651 | 650.1486579 | 0.235661674  | 1.116033008 | 0.970183277 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7L4F8 | TY-2482_chromosome | - | 4069992 | 4070579 | 187.4964829 | 219.3256208 | 208.2696777 | 124.4801796 | 120.6481487 | 126.2074218 | 0.700456848  | 5.209422263 | 4.839323348 |
| B7L4F9 | TY-2482_chromosome | - | 4070588 | 4071478 | 160.5505353 | 204.665557  | 231.9974841 | 112.5029038 | 116.4161436 | 106.9820901 | 0.828023845  | 5.731579575 | 5.340587045 |
| B7L4G0 | TY-2482_chromosome | - | 4071482 | 4073032 | 268.5649314 | 297.8430821 | 283.061696  | 524.8483974 | 541.2163376 | 469.0357344 | -0.879399837 | 10.49904114 | 9.983751533 |
| B7L4G1 | TY-2482_chromosome | - | 4073109 | 4074323 | 146.0945267 | 139.6269694 | 136.6528664 | 503.9282421 | 565.5575942 | 533.9930386 | -1.922655372 | 39.85473229 | 38.98896663 |
| B7L4G2 | TY-2482_chromosome | - | 4074455 | 4075594 | 639.8113586 | 609.7053135 | 519.2741909 | 741.1084413 | 691.5876871 | 739.4635735 | -0.3196972   | 2.054854555 | 1.837592399 |
| B7L4G3 | TY-2482_chromosome | - | 4075628 | 4077139 | 54.94874329 | 47.10982333 | 50.3733627  | 32.29360439 | 32.79958781 | 40.64500474 | 0.555212991  | 1.480468641 | 1.304377382 |
| B5YYD5 | TY-2482_chromosome | + | 4077550 | 4078380 | 57.44644507 | 69.68232073 | 65.99676245 | 36.70960179 | 42.68518488 | 39.53399411 | 0.667907508  | 2.461273391 | 2.218134779 |
| B7L4G5 | TY-2482_chromosome | + | 4078398 | 4079336 | 84.49979504 | 59.55987627 | 99.8075821  | 62.95679869 | 64.21827158 | 62.99495781 | 0.469088811  | 1.086609521 | 0.943671272 |
| B7L4G6 | TY-2482_chromosome | + | 4079390 | 4080673 | 92.8699332  | 99.13199012 | 96.27460131 | 85.01692728 | 91.96649921 | 93.13232953 | 0.082471924  | 0.189730953 | 0.153741892 |
| B7L4G8 | TY-2482_chromosome | + | 4081019 | 4082347 | 31.4710916  | 47.71047381 | 33.31581732 | 34.23974214 | 32.30255026 | 20.54219455 | 0.249884958  | 0.596590799 | 0.503082107 |
| B7L4G9 | TY-2482_chromosome | + | 4082458 | 4082985 | 172.0649218 | 175.4960116 | 149.863113  | 111.6084832 | 79.220231   | 91.42081614 | 0.780337002  | 5.185316684 | 4.816236522 |
| B7L4H0 | TY-2482_chromosome | + | 4082981 | 4084840 | 733.2098193 | 760.5220591 | 747.1324711 | 416.0336957 | 365.2101252 | 352.6633583 | 0.969544217  | 17.2456995  | 16.62442925 |
| B5YZ84 | TY-2482_chromosome | + | 4084924 | 4085511 | 701.7927238 | 573.7620525 | 712.2890696 | 735.5121912 | 871.9945064 | 825.9970974 | -0.228953962 | 1.814690389 | 1.613207128 |
| B7L4H2 | TY-2482_chromosome | - | 4085595 | 4086434 | 159.7845743 | 1611.592197 | 1639.272084 | 1821.895613 | 1875.798495 | 1777.788879 | -0.174254169 | 0.989072252 | 0.850685057 |
| B7L4H3 | TY-2482_chromosome | - | 4086444 | 4086818 | 1733.963277 | 1661.40995  | 1586.413947 | 1510.521272 | 1421.837022 | 1443.650267 | 0.181921467  | 1.089706247 | 0.94592083  |
| B7L4H4 | TY-2482_chromosome | - | 4086824 | 4087642 | 4820.735563 | 4816.367387 | 4675.259941 | 3753.045524 | 3637.143436 | 3499.096096 | 0.386323117  | 1.05240255  | 0.911875715 |
| B7L4H5 | TY-2482_chromosome | - | 4087642 | 4088628 | 4659.14078  | 4222.56503  | 3810.750889 | 3039.743925 | 3147.274571 | 2926.836693 | 0.469263404  | 1.874491595 | 1.668837741 |
| B7L4H6 | TY-2482_chromosome | - | 4088631 | 4089914 | 10637.32374 | 9214.740426 | 9758.367476 | 8426.42467  | 8247.018201 | 7872.261265 | 0.295028742  | 0.394728785 | 0.32698378  |
| B7L4H7 | TY-2482_chromosome | - | 4089970 | 4092321 | 9937.128807 | 9357.014667 | 9521.293192 | 12369.30915 | 12053.35769 | 11154.19448 | -0.297602054 | 0.44734675  | 0.373251099 |
| B7L4H8 | TY-2482_chromosome | + | 4092576 | 4093388 | 1385.371822 | 1548.422159 | 1551.508187 | 1473.695947 | 1503.292909 | 1613.947932 | -0.042462538 | 0.12492597  | 0.10022519  |
| B7L4H9 | TY-2482_chromosome | + | 4093511 | 4094167 | 1306.715802 | 1310.506482 | 1245.845328 | 588.1797615 | 642.6408789 | 623.8302924 | -0.049964944 | 24.47050815 | 23.76034641 |
| B7L4I0 | TY-2482_chromosome | - | 4094182 | 4097085 | 2722.887459 | 2143.62244  | 2152.667456 | 2966.485461 | 3624.067547 | 3187.505573 | 1.4088377222 | 2.202449109 | 1.975025851 |
| B7L4I1 | TY-2482_chromosome | - | 4097253 | 4099601 | 1817.409413 | 1932.038234 | 1877.835641 | 1281.107885 | 1226.01548  | 1190.289144 | 0.590817154  | 7.846437808 | 7.396381792 |
| B7L4I2 | TY-2482_chromosome | - | 4099679 | 4100371 | 55.53521228 | 53.02902653 | 64.299905   | 56.3842251  | 61.89728341 | 58.38053992 | 0.002379238  | 0.029419843 | 0.023320357 |
| B7L4I3 | TY-2482_chromosome | - | 4100543 | 4102042 | 187.0232445 | 198.200743  | 182.6462488 | 170.7098765 | 156.3516406 | 186.9411597 | 0.125079832  | 0.405765892 | 0.336951282 |
| B7L4I4 | TY-2482_chromosome | - | 4102056 | 4103753 | 85.55735162 | 62.11451245 | 78.94767295 | 97.58134951 | 94.03628339 | 107.6512024 | -0.331129545 | 1.218083319 | 1.064372839 |
| D2NB21 | TY-2482_chromosome | + | 4103875 | 4104096 | 162.6070443 | 152.9869931 | 172.192452  | 102.9170926 | 106.8058387 | 145.3501206 | 0.49631953   | 2.056624948 | 1.839075751 |
| B5YZA0 | TY-2482_chromosome | + | 4104041 | 4104967 | 648.9059736 | 714.57018   | 683.9037798 | 412.7328434 | 371.2319226 | 421.0426953 | 0.746224343  | 10.58812449 | 10.06997579 |
| B7L4I6 | TY-2482_chromosome | + | 4105056 | 4105817 | 467.1188616 | 592.2278742 | 478.7728792 | 691.7746499 | 623.1804331 | 787.076437  | -0.515842992 | 3.543402899 | 3.244109389 |
| B7L4I7 | TY-2482_chromosome | + | 4105937 | 4106632 | 319.264467  | 268.8626425 | 250.5172713 | 348.3583684 | 271.4117717 | 297.9281147 | 0.049551019  | 0.098903229 | 0.078144357 |
| B7L4I8 | TY-2482_chromosome | - | 4106619 | 4108226 | 235.9278683 | 249.2755423 | 245.6705217 | 231.015121  | 395.477421  | 351.0897023 | -0.568411854 | 4.336485273 | 4.003380185 |
| B7L4I9 | TY-2482_chromosome | - | 4108205 | 4109185 | 162.4137739 | 134.2605715 | 173.4414855 | 427.3157938 | 501.6294213 | 522.9945457 | -1.558124012 | 25.90364997 | 25.17850325 |
| B7L4J0 | TY-2482_chromosome | - | 4109352 | 4111004 | 577.539248  | 454.7333943 | 463.0204702 | 608.5870793 | 569.8860637 | 616.1347832 | -0.232340442 | 1.434136236 | 1.262071664 |
| B7L4J1 | TY-2482_chromosome | + | 4111326 | 4112501 | 585.5084148 | 637.3663628 | 622.0778314 | 491.592486  | 479.4399635 | 494.9459665 | 0.317523434  | 2.470853005 | 2.226965895 |
| B7L4J2 | TY-2482_chromosome | - | 4112556 | 4113158 | 427.49256   | 412.9775143 | 436.6788542 | 313.895382  | 284.9602273 | 301.5333603 | 0.516956777  | 4.415419462 | 4.078872721 |
| B7L4J3 | TY-2482_chromosome | - | 4113172 | 4114569 | 663.2613182 | 636.2186836 | 708.0549341 | 378.9711157 | 407.4150724 | 359.618999  | 0.830745262  | 11.98109473 | 11.44118265 |
| B7LFU4 | TY-2482_chromosome | - | 4114575 | 4115663 | 526.2307053 | 464.604988  | 495.7136217 | 242.8459978 | 246.673462  | 251.4308461 | 1.030447291  | 15.54892625 | 14.948256   |
| B7LFU5 | TY-2482_chromosome | - | 4115666 | 4117234 | 555.7880983 | 488.8092272 | 588.6993725 | 235.26156   | 264.5414114 | 265.8456441 | 1.143558096  | 17.74169953 | 17.11383228 |
| B7LFU7 | TY-2482_chromosome | + | 4118073 | 4119014 | 112.8652381 | 87.37465114 | 89.43658482 | 86.14471959 | 78.26347255 | 77.0808795  | 0.288054831  | 0.752538175 | 0.641300716 |
| B7LFU8 | TY-2482_chromosome | + | 4119335 | 4121056 | 557.1768452 | 548.6184607 | 486.0572185 | 471.4023015 | 450.13501   | 534.6366709 | 0.112614659  | 0.515722713 | 0.430655489 |
| B5YZB5 | TY-2482_chromosome | + | 4121032 | 4121550 | 254.6519575 | 238.536286  | 211.6857497 | 218.6943173 | 221.2653265 | 250.0041786 | 0.021288891  | 0.067103816 | 0.05277637  |
| B7LFV0 | TY-2482_chromosome | + | 4121733 | 4122734 | 3466.592876 | 3147.59365  | 3366.235052 | 4059.140196 | 3455.391061 | 3613.796243 | -0.137242106 | 0.382447917 | 0.316225507 |
| E6A074 | TY-2482_chromosome | + | 4122903 | 4123103 | 108.7425748 | 125.9929501 | 85.54913774 | 226.6038684 | 247.6988803 | 248.7528138 | -1.257773972 | 10.60608485 | 10.06736206 |
| B7LFV1 | TY-2482_chromosome | + | 4123339 | 4123794 | 2352.629403 | 2720.173764 | 2749.652307 | 2600.608689 | 3217.092413 | 3294.083592 | -0.226860699 | 0.694166314 | 0.589399327 |
| B7LFV2 | TY-2482_chromosome | + | 4123799 | 4124737 | 4144.706786 | 4035.236475 | 4311.47934  | 5144.381637 | 5233.220437 | 5564.448257 | -0.333463295 | 0.647153114 | 0.546902609 |
| B7LFV3 | TY-2482_chromosome | + | 4124737 | 4125099 | 1575.644203 | 1260.756976 | 1334.966273 | 1828.508316 | 2004.462562 | 2149.987409 | -0.479573826 | 4.980097739 | 4.618882889 |
| B7LFV4 | TY-2482_chromosome | + | 4125118 | 4126881 | 4736.903293 | 4545.404095 | 3251.020965 | 4423.868251 | 4926.441726 | 4104.653161 | -0.160974282 | 0.113927212 | 0.114123748 |
| B7LFV5 | TY-2482_chromosome | + | 4126871 | 4128355 | 6634.222051 | 5853.508033 | 6235.451041 | 4937.729234 | 4936.027581 | 4508.105985 | 0.403021837  | 0.694981343 | 0.589992833 |
| B7LFV6 | TY-2482_chromosome | + | 4128355 | 4129710 | 5140.420534 | 4585.621755 | 4580.536536 | 3758.962429 | 3521.814934 | 3166.356475 | 0.460649631  | 1.546807159 | 1.365322976 |
| B7LFV7 | TY-2482_chromosome | + | 4129707 | 4130786 | 4257.789946 | 3768.933725 | 3721.423796 | 2415.725687 | 2589.089543 | 2602.207819 | 0.641122667  | 3.13045204  | 2.852133211 |
| B7LFV8 | TY-2482_chromosome | + | 4130792 | 4132105 | 6475.26815  | 6234.513172 | 6350.386671 | 4022.434141 | 4086.113158 | 4147.642797 | 0.645853944  | 1.512647073 | 1.334069264 |
| B7LFV9 | TY-2482_chromosome | + | 4132108 | 4133349 | 4125.341406 | 4376.069101 | 4173.799801 | 2979.598254 | 2866.147892 | 2955.66108  | 0.510032018  | 2.253878285 | 2.023951039 |
| B7LFW0 | TY-2482_chromosome | + | 4133349 | 4134413 | 3554.808672 | 3578.668038 | 3729.632079 | 3044.292541 | 3099.501616 | 3302.597196 | 0.21170318   | 0.539571374 | 0.451211207 |
| B7LFW1 | TY-2482_chromosome | + | 4134470 | 4135942 | 6563.256968 | 6611.439188 | 6722.42639  | 5035.325267 | 5028.59453  | 4937.481155 | 0.409093614  | 0.75828688  | 0.646374527 |
| B7LFW2 | TY-2482_chromosome | + | 4135938 | 4136855 | 4380.844751 | 4930.877811 | 4789.99502  | 3413.324477 | 3394.228007 | 3298.004486 | 0.460215393  | 1.944898117 | 1.734327403 |



|               |                    |   |         |         |              |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|---------|---------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LFW3</b> | TY-2482_chromosome | + | 4136860 | 4137687 | 3793.913491  | 4147.723066 | 3951.060751 | 2740.053691 | 2551.887151 | 2512.968438 | 0.584939627  | 2.829223331 | 2.566474606  |
| <b>B7LFW4</b> | TY-2482_chromosome | + | 4137687 | 4138946 | 5954.343119  | 7051.513382 | 6649.145374 | 4118.323712 | 3698.46568  | 3870.352494 | 0.716981327  | 1.93308571  | 1.723643768  |
| <b>B7LFW5</b> | TY-2482_chromosome | + | 4139010 | 4140158 | 13983.19751  | 14417.4104  | 15542.26259 | 7201.931838 | 6951.699227 | 6487.768242 | 1.097776812  | 2.957303784 | 2.688296873  |
| <b>B7LFW6</b> | TY-2482_chromosome | + | 4140262 | 4141176 | 23443.66906  | 21191.75657 | 22967.50537 | 33238.2781  | 35869.74994 | 34192.09066 | -0.584787856 | 1.047980263 | 0.907693834  |
| <b>D6J5V7</b> | TY-2482_chromosome | - | 4141154 | 4141405 | 1768.248194  | 1722.69013  | 1691.175035 | 2642.239914 | 2867.246261 | 2494.358216 | -0.630272445 | 7.655425264 | 7.209032124  |
| <b>B5Y2D3</b> | TY-2482_chromosome | + | 4141335 | 4141919 | 2636.22508   | 2616.430279 | 2520.201198 | 4506.336965 | 4913.970309 | 4544.703696 | -0.851824767 | 4.985199409 | 4.623592638  |
| <b>B7LFW8</b> | TY-2482_chromosome | + | 4141984 | 4144686 | 10246.24757  | 10277.97214 | 10401.9161  | 15811.6932  | 16035.72121 | 13779.08126 | -0.564136618 | 1.009118567 | 0.871952044  |
| <b>B7LFW9</b> | TY-2482_chromosome | - | 4144749 | 4145135 | 361.5092248  | 419.9261234 | 415.0414403 | 367.7774826 | 386.6748851 | 361.1801332 | 0.080844479  | 0.344899863 | 0.285812846  |
| <b>C8TGN2</b> | TY-2482_chromosome | - | 4145241 | 4145435 | 664.6522887  | 660.6368165 | 625.2026681 | 660.4334941 | 796.5137741 | 750.9676181 | -0.185330844 | 0.975318841 | 0.841118244  |
| <b>B7LFX0</b> | TY-2482_chromosome | - | 4145448 | 4146188 | 1163.766013  | 1113.492056 | 1198.096043 | 1853.769679 | 1925.326038 | 1830.303071 | -0.672787155 | 9.670657987 | 9.137323908  |
| <b>B7LFX1</b> | TY-2482_chromosome | - | 4146191 | 4146808 | 830.1563604  | 1147.880277 | 1019.998071 | 1103.90265  | 1011.699175 | 1086.110286 | -0.156595657 | 0.42869916  | 0.357585536  |
| <b>B7LFX2</b> | TY-2482_chromosome | + | 4147033 | 4148073 | 2958.554506  | 3166.160215 | 3238.230198 | 2294.402977 | 2263.698505 | 2280.694958 | 0.449848587  | 2.259809102 | 2.029734112  |
| <b>B7LFX3</b> | TY-2482_chromosome | - | 4148114 | 4149313 | 109.1757914  | 112.0224771 | 119.0742289 | 150.846866  | 186.8503779 | 174.5686814 | -0.579395598 | 3.105181485 | 2.82867531   |
| <b>B7LFX4</b> | TY-2482_chromosome | - | 4149306 | 4150688 | 64.21266716  | 96.09209948 | 70.66326009 | 88.43478239 | 84.36472454 | 97.05344465 | -0.323246408 | 0.579378541 | 0.487377817  |
| <b>B7LFX5</b> | TY-2482_chromosome | - | 4150701 | 4151138 | 22.6226207   | 12.11254833 | 25.44607818 | 36.97141732 | 33.36265477 | 33.42390094 | -0.647476543 | 1.845972934 | 1.642409383  |
| <b>D6J5W8</b> | TY-2482_chromosome | + | 4151160 | 4151381 | 97.01904531  | 73.02980051 | 91.83674551 | 95.28932972 | 96.09406818 | 116.7192566 | -0.164902599 | 0.560736001 | 0.470452283  |
| <b>B7LFX6</b> | TY-2482_chromosome | - | 4151344 | 4152234 | 1352.063243  | 1257.738523 | 1300.290949 | 1105.778378 | 1056.761732 | 1097.57104  | 0.276457571  | 2.147383059 | 1.923761735  |
| <b>B7LFX7</b> | TY-2482_chromosome | + | 4152322 | 4152870 | 1606.394475  | 1657.967265 | 1913.195244 | 1677.094505 | 1526.253416 | 1541.61673  | 0.147840411  | 0.607093387 | 0.506352883  |
| <b>B7LFX8</b> | TY-2482_chromosome | + | 4152870 | 4153721 | 2043.410446  | 2155.285579 | 2198.073109 | 2188.252287 | 2078.81054  | 2263.914526 | -0.030583441 | 0.105405311 | 0.083549966  |
| <b>B7LFX9</b> | TY-2482_chromosome | - | 4153770 | 4155140 | 1215.538303  | 1130.00999  | 1170.978603 | 1203.490234 | 1184.050572 | 1185.411145 | -0.008744874 | 0.075242005 | 0.059473515  |
| <b>B7LFY0</b> | TY-2482_chromosome | + | 4155681 | 4156442 | 2212.828142  | 1772.158613 | 1912.467036 | 2663.233272 | 4602.051177 | 4714.086232 | -0.967609329 | 5.473140031 | 5.0908358    |
| <b>B7LFY1</b> | TY-2482_chromosome | + | 4156606 | 4159266 | 79480.61358  | 73516.98974 | 77974.19193 | 18857.76371 | 20790.42382 | 18696.77965 | 2.003980874  | 6.673862011 | 6.258209548  |
| <b>B7LFY2</b> | TY-2482_chromosome | + | 4159284 | 4161173 | 57929.51047  | 47658.33938 | 48955.43892 | 12917.77535 | 12791.79882 | 12436.59903 | 2.04441472   | 7.066400876 | 6.640200087  |
| <b>B7LFY3</b> | TY-2482_chromosome | + | 4161501 | 4162922 | 54872.92604  | 53242.76317 | 50866.24107 | 30401.32194 | 29878.83394 | 27528.63397 | 0.847767555  | 1.697245316 | 1.503169658  |
| <b>B7LFY4</b> | TY-2482_chromosome | - | 4162999 | 4164753 | 409.8559905  | 427.6348491 | 432.3836011 | 363.4061342 | 420.0343708 | 466.6126439 | 0.0027879765 | 0.060335889 | 0.047713497  |
| <b>B7LFY5</b> | TY-2482_chromosome | + | 4165108 | 4167702 | 55363.36106  | 45232.44962 | 51733.71958 | 34767.40042 | 34198.18682 | 27389.97494 | 0.699032341  | 1.123714003 | 0.972255249  |
| <b>B7LFY6</b> | TY-2482_chromosome | + | 4167881 | 4168240 | 924.807535   | 932.7866506 | 893.8090925 | 701.327756  | 635.2794729 | 684.6455043 | 0.435244107  | 4.788043724 | 4.434946764  |
| <b>B7LFY7</b> | TY-2482_chromosome | - | 4168284 | 4169075 | 3408.783969  | 3622.160143 | 3771.205774 | 3502.26528  | 3514.258677 | 3413.117322 | 0.050794117  | 0.102170469 | 0.080863706  |
| <b>B7LFY8</b> | TY-2482_chromosome | - | 4169094 | 4169957 | 4708.86254   | 4806.127235 | 4998.247741 | 4287.004247 | 4329.461308 | 4417.897885 | 0.161384912  | 0.228499013 | 0.187088928  |
| <b>B7LFY9</b> | TY-2482_chromosome | - | 4170066 | 4170581 | 519.1811247  | 674.4500684 | 529.1204508 | 1016.333872 | 1140.892106 | 1254.702667 | -1.059092319 | 15.41206572 | 14.812343487 |
| <b>B7LFX0</b> | TY-2482_chromosome | + | 4170576 | 4172123 | 975.2248884  | 972.4961324 | 965.5474054 | 649.4947723 | 644.3119942 | 567.5427732 | 0.64021468   | 9.310972093 | 8.821944365  |
| <b>B7LFX1</b> | TY-2482_chromosome | - | 4172176 | 4174563 | 1864.554221  | 1906.42853  | 2008.365038 | 573.0391364 | 648.373362  | 579.3609828 | 1.689299268  | 61.73211878 | 60.70778621  |
| <b>B7LGP1</b> | TY-2482_chromosome | + | 4174769 | 4175302 | 4084.598208  | 4100.498847 | 4175.10503  | 2875.036159 | 2765.846345 | 2871.440103 | 0.541229372  | 2.343451097 | 2.107424735  |
| <b>B7LGI8</b> | TY-2482_chromosome | - | 4175349 | 4176008 | 3370.721571  | 3129.949854 | 3234.13413  | 3470.812603 | 3768.350256 | 3594.134354 | -0.138996711 | 0.378969661 | 0.313455972  |
| <b>B7LGI9</b> | TY-2482_chromosome | + | 4176117 | 4177040 | 986.9670245  | 996.6904006 | 1118.829664 | 1303.179114 | 1327.310325 | 1275.547245 | 0.616006574  | 2.914072022 | 2.46700033   |
| <b>B7LGJ0</b> | TY-2482_chromosome | + | 4177040 | 4177807 | 868.1273291  | 810.2337007 | 975.0563225 | 992.9163138 | 989.1251977 | 919.9534673 | -0.089960984 | 0.594586617 | 0.50129367   |
| <b>B7LGJ1</b> | TY-2482_chromosome | + | 4177915 | 4178352 | 353.7071208  | 466.0055494 | 419.4646496 | 413.0305199 | 369.3484706 | 374.9959771 | 0.043017173  | 0.27914926  | 0.230026549  |
| <b>B7LGJ2</b> | TY-2482_chromosome | + | 4178419 | 4179645 | 1069.635777  | 1168.561906 | 1023.279389 | 1002.566712 | 1033.944523 | 1031.728487 | 0.052624966  | 0.368381032 | 0.304281327  |
| <b>B7LGJ3</b> | TY-2482_chromosome | - | 4179655 | 4180032 | 1918.421784  | 2104.443491 | 2127.636708 | 1415.374629 | 1277.829572 | 1288.843614 | 0.616006575  | 8.117547293 | 7.659072535  |
| <b>B7LGJ4</b> | TY-2482_chromosome | + | 4180306 | 4181205 | 204.1388555  | 257.6552811 | 254.0108699 | 155.1745992 | 137.6608041 | 144.9361537 | 0.679029031  | 5.011767554 | 4.648950878  |
| <b>B7LGJ5</b> | TY-2482_chromosome | - | 4181285 | 4182133 | 3626.063683  | 3555.974304 | 3517.223276 | 2753.938422 | 2574.499661 | 2600.555535 | 0.43065064   | 1.731726536 | 1.535332453  |
| <b>B7LGJ6</b> | TY-2482_chromosome | - | 4182148 | 4182939 | 2665.669109  | 2569.278388 | 2822.946742 | 1923.128699 | 1886.638196 | 1752.285908 | 0.553424506  | 5.2656902   | 4.89231512   |
| <b>B7LGJ7</b> | TY-2482_chromosome | - | 4183055 | 4184326 | 935.79513603 | 88.32636319 | 76.60553994 | 94.94682594 | 129.7715266 | 130.348842  | -0.466356757 | 1.646847479 | 1.456192748  |
| <b>B7LGJ8</b> | TY-2482_chromosome | - | 4184382 | 4184975 | 25.63766794  | 22.76936321 | 20.40316348 | 20.56894616 | 39.08842843 | 45.41920103 | -0.598628976 | 1.193397014 | 1.041171303  |
| <b>B7LGJ9</b> | TY-2482_chromosome | - | 4185005 | 4185604 | 29.28730973  | 31.78762395 | 27.48562417 | 47.50592184 | 49.80673176 | 68.81300081 | -0.928870438 | 2.938019179 | 2.669819658  |
| <b>B7LKG0</b> | TY-2482_chromosome | - | 4185622 | 4186188 | 22.99539169  | 26.48792259 | 24.44722699 | 39.53867054 | 55.95192669 | 43.41536497 | -0.938162681 | 2.725614811 | 2.467619448  |
| <b>Q8Z9C7</b> | TY-2482_chromosome | - | 4186169 | 4188769 | 43.13078648  | 58.16798797 | 57.17211516 | 105.3507533 | 140.1532359 | 144.6922066 | -1.323314429 | 8.291234711 | 7.82773043   |
| <b>B7LKG2</b> | TY-2482_chromosome | - | 4188843 | 4189580 | 16.31660316  | 10.45822575 | 19.72964542 | 16.95621499 | 25.05896015 | 26.78480675 | -0.442343077 | 0.864997223 | 0.740753914  |
| <b>B7LKG3</b> | TY-2482_chromosome | - | 4189688 | 4190269 | 27.101861    | 31.50466463 | 49.22738953 | 23.67794322 | 32.79975852 | 49.57353082 | 0.108055418  | 0.017472358 | 0.013451893  |
| <b>B7LKG4</b> | TY-2482_chromosome | - | 4190642 | 4191118 | 172.396433   | 172.8943551 | 176.6831844 | 685.5685358 | 806.0303059 | 661.038037  | -2.043068265 | 47.50306752 | 46.5829442   |
| <b>B7LKG5</b> | TY-2482_chromosome | - | 4191118 | 4192533 | 2661.8325    | 2369.454028 | 2425.362836 | 7197.035597 | 8627.848947 | 7656.904472 | -1.636307959 | 7.279086296 | 6.844447788  |
| <b>B7LKG6</b> | TY-2482_chromosome | - | 4192575 | 4193498 | 538.8782899  | 713.9973237 | 590.7074136 | 699.1034848 | 721.9601856 | 658.9147691 | -0.248146449 | 0.931432674 | 0.80194631   |
| <b>E7IEQ9</b> | TY-2482_chromosome | - | 4193468 | 4193990 | 8401.815527  | 9385.652145 | 8769.885614 | 10489.25272 | 10709.03108 | 9956.85361  | -0.258696552 | 0.318992717 | 0.263677019  |
| <b>B7LKG8</b> | TY-2482_chromosome | - | 4194171 | 4194872 | 2136.580441  | 2525.576761 | 2580.043201 | 627.1747291 | 520.0264259 | 471.5417418 | 2.137945187  | 74.22820149 | 73.11425814  |
| <b>B7LGL0</b> | TY-2482_chromosome | + | 4195491 | 4197917 | 2033.674276  | 2247.265339 | 2102.03247  | 2266.979355 | 2212.955919 | 2176.062631 | -0.086562062 | 0.243714606 | 0.199327588  |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7LGL1 | TY-2482_chromosome | + | 4198116 | 4200647 | 4394.306964 | 3682.675041 | 4028.638087 | 3963.585796 | 4070.45156  | 3696.482507 | 0.078773325  | 0.090487389 | 0.071368054 |
| B7LGL2 | TY-2482_chromosome | + | 4200870 | 4203110 | 4843.237871 | 4584.186898 | 4487.113142 | 946.3939276 | 1031.910311 | 1055.892926 | 2.202873181  | 36.82526742 | 35.98190587 |
| B7LGL3 | TY-2482_chromosome | + | 4203164 | 4203958 | 662.9429196 | 608.4547596 | 649.3716389 | 279.4107246 | 277.8326584 | 263.534566  | 1.245446742  | 24.79893385 | 24.08383435 |
| B7LGL4 | TY-2482_chromosome | + | 4203961 | 4204848 | 461.2738919 | 419.1459279 | 432.5542784 | 181.085005  | 220.2819563 | 180.0151403 | 1.189507637  | 17.99127169 | 17.36118298 |
| B7LGL5 | TY-2482_chromosome | + | 4204848 | 4206827 | 891.7996565 | 869.9568136 | 724.7645047 | 441.1626245 | 480.4641247 | 423.6295979 | 0.853375007  | 13.53693307 | 12.97059781 |
| B7LGL6 | TY-2482_chromosome | - | 4206868 | 4208145 | 7524.721065 | 6277.325026 | 6952.349315 | 5863.49418  | 5671.391748 | 5494.42031  | 0.321958449  | 0.454367566 | 0.379031958 |
| B7LGL7 | TY-2482_chromosome | + | 4208370 | 4209788 | 1939.471625 | 2174.768248 | 2033.04748  | 1385.081084 | 1498.633798 | 1451.108962 | 0.478545836  | 5.391362838 | 5.013234548 |
| B7LGL8 | TY-2482_chromosome | + | 4209873 | 4210214 | 1906.64225  | 2030.669805 | 1836.409286 | 1020.463786 | 977.964465  | 978.1793376 | 0.92747726   | 20.30992009 | 19.65657706 |
| B7LGL9 | TY-2482_chromosome | - | 4210267 | 4210887 | 554.507042  | 582.7401309 | 578.9752498 | 665.7973487 | 671.6803735 | 697.6132486 | -0.251269089 | 1.618056003 | 1.429521442 |
| B7LGM0 | TY-2482_chromosome | - | 4210928 | 4211725 | 1470.802889 | 1331.853728 | 1499.750301 | 1226.856786 | 1046.023498 | 1081.648872 | 0.388030843  | 3.332381424 | 3.043870951 |
| B7LGM1 | TY-2482_chromosome | - | 4211721 | 4212416 | 4805.735605 | 4346.88226  | 4446.815621 | 3916.132865 | 3760.340167 | 3863.977504 | 0.252226868  | 0.532990579 | 0.445908064 |
| B7LGM2 | TY-2482_chromosome | + | 4212500 | 4214014 | 1445.348727 | 1619.168478 | 1505.785599 | 1495.247817 | 1420.118574 | 1481.997903 | 0.028086957  | 0.205483928 | 0.167075548 |
| B7LGM3 | TY-2482_chromosome | + | 4214147 | 4215568 | 3141.953858 | 3058.077123 | 3376.05221  | 7527.96453  | 7992.237481 | 8534.492096 | -1.302603067 | 4.922944937 | 4.563922995 |
| B7LGM4 | TY-2482_chromosome | + | 4215726 | 4216880 | 768.0388686 | 945.7613954 | 897.8253835 | 970.9519892 | 768.4189849 | 827.0547585 | -0.013610469 | 0.057764977 | 0.045947911 |
| B7LGM5 | TY-2482_chromosome | - | 4216975 | 4217358 | 2085.21241  | 2082.61732  | 1962.811146 | 1882.128255 | 1958.109387 | 2175.814387 | 0.021201138  | 0.089274151 | 0.070609146 |
| B7LGM6 | TY-2482_chromosome | - | 4217676 | 4218497 | 10243.39689 | 10369.31792 | 12088.10753 | 6689.011052 | 6214.453716 | 6709.285098 | 0.766765539  | 1.637942399 | 1.448062855 |
| B7LGM7 | TY-2482_chromosome | - | 4218531 | 4221200 | 3203.356706 | 2985.616046 | 3116.280859 | 1567.352469 | 1491.718856 | 1380.681964 | 1.079101092  | 13.65470403 | 13.0864414  |
| B7LGM8 | TY-2482_chromosome | - | 4221265 | 4222056 | 5191.99395  | 5941.881779 | 5838.739978 | 3454.334511 | 3479.831963 | 3421.003483 | 0.693665046  | 13.65470403 | 13.0864414  |
| B7LGM9 | TY-2482_chromosome | - | 4222059 | 4222277 | 425.5474924 | 425.7518019 | 368.2841825 | 283.215397  | 297.7346621 | 225.9934458 | 0.560678225  | 4.705071039 | 4.355879631 |
| tff    | TY-2482_chromosome | + | 4222262 | 4222397 | 27379.02882 | 28575.61369 | 27369.82287 | 15463.2976  | 16148.78401 | 15823.32135 | 0.800014465  | 1.659091705 | 1.467727224 |
| B7LGN0 | TY-2482_chromosome | + | 4222424 | 4223146 | 113096.1435 | 105988.9416 | 119420.7444 | 74538.3789  | 68840.7278  | 76354.742   | 0.654604946  | 1.007627101 | 0.870811695 |
| A1A7L4 | TY-2482_chromosome | - | 4223104 | 4224153 | 114347.6746 | 111259.1888 | 117491.38   | 63900.26588 | 60578.73965 | 65052.2573  | 0.870684956  | 1.633699091 | 1.44422348  |
| B7LGN2 | TY-2482_chromosome | + | 4224405 | 4225127 | 7706.528149 | 8975.244305 | 9016.678734 | 2962.641374 | 2713.265512 | 2840.982494 | 1.576101811  | 6.683957814 | 6.267852016 |
| B7LGN3 | TY-2482_chromosome | + | 4225422 | 4225976 | 14028.39828 | 13529.8047  | 14678.88576 | 8392.19095  | 8293.362231 | 8852.456642 | 0.74752371   | 1.531519464 | 1.35123209  |
| B7LGN4 | TY-2482_chromosome | + | 4226071 | 4227264 | 1744.810131 | 2171.993064 | 1943.953225 | 2211.685755 | 2148.882792 | 1985.197828 | -0.166514261 | 0.512548603 | 0.427904461 |
| B7LGN5 | TY-2482_chromosome | + | 4227453 | 4228211 | 2317.951659 | 2367.04726  | 2426.551147 | 4553.844822 | 5346.295443 | 5038.922729 | -1.06579293  | 7.477559236 | 7.036723226 |
| B7LGN6 | TY-2482_chromosome | + | 4228227 | 4229081 | 2873.520784 | 2740.719552 | 2851.891805 | 4016.641989 | 4447.380466 | 4146.998041 | -0.561575269 | 2.58337701  | 2.332415542 |
| B7LGN7 | TY-2482_chromosome | + | 4229096 | 4230445 | 6553.503825 | 6749.108406 | 6563.06594  | 6252.818186 | 7129.322678 | 7407.043616 | -0.068951751 | 0.079233945 | 0.06248714  |
| B7LGN8 | TY-2482_chromosome | + | 4230478 | 4232907 | 22524.0366  | 22084.07701 | 23032.14599 | 16640.17679 | 17278.06314 | 16071.2356  | 0.445032334  | 0.671336132 | 0.567895911 |
| B7LGN9 | TY-2482_chromosome | + | 4233032 | 4233514 | 19001.83357 | 18157.15998 | 19231.98619 | 12741.11072 | 12260.05249 | 12095.45581 | 0.61850171   | 1.100842065 | 0.956207824 |
| B7LGP0 | TY-2482_chromosome | + | 4233521 | 4234543 | 15211.33209 | 13869.44416 | 14868.67974 | 11839.16396 | 12098.36774 | 11218.29354 | 0.343357851  | 0.46538372  | 0.388181514 |
| Q14F34 | TY-2482_chromosome | + | 4234579 | 4235103 | 5544.003025 | 5334.9518   | 5558.670486 | 5310.490904 | 4974.246044 | 5038.759466 | 0.111786197  | 0.135734434 | 0.109557715 |
| B7LGP3 | TY-2482_chromosome | + | 4235110 | 4235895 | 9122.776219 | 8832.930463 | 8308.909982 | 7756.115033 | 8068.779832 | 7866.493265 | 0.141270502  | 0.193434387 | 0.156688551 |
| B7LGP4 | TY-2482_chromosome | + | 4235898 | 4237043 | 3512.093726 | 3328.665503 | 3261.576118 | 4554.622316 | 4921.038936 | 4632.692915 | -0.479373427 | 1.953899395 | 1.742763194 |
| B7LGP5 | TY-2482_chromosome | + | 4237043 | 4237636 | 1306.370648 | 1110.893166 | 1269.940951 | 1513.744214 | 1591.768529 | 1510.816278 | -0.282651328 | 2.643025753 | 2.389108302 |
| B7LGP6 | TY-2482_chromosome | + | 4237676 | 4241155 | 8246.696636 | 7635.213229 | 7795.798582 | 4435.447592 | 4698.642957 | 4341.612769 | 0.824703615  | 2.115319866 | 1.893732032 |
| B7LGP7 | TY-2482_chromosome | + | 4241171 | 4242127 | 7872.791127 | 6948.271237 | 7562.91408  | 4833.672959 | 4889.653165 | 4970.344346 | 0.63786391   | 1.337721591 | 1.173600089 |
| B7LGP8 | TY-2482_chromosome | + | 4242229 | 4244367 | 1533.040322 | 1481.862603 | 1772.387007 | 630.89507   | 681.6140445 | 557.753756  | 1.388893383  | 34.95833289 | 34.13163125 |
| B7LGP9 | TY-2482_chromosome | + | 4244427 | 4244813 | 487.349488  | 457.0137216 | 457.0246777 | 262.2279561 | 245.9722082 | 264.8411273 | 0.865523274  | 11.52479898 | 10.99028193 |
| B7LGG0 | TY-2482_chromosome | + | 4244881 | 4246176 | 1239.700266 | 1124.294498 | 1123.730487 | 935.4477486 | 984.4868153 | 977.8863391 | 0.279540254  | 2.096177988 | 1.875169407 |
| B5Z0G8 | TY-2482_chromosome | - | 4246231 | 4246488 | 1580.057171 | 1627.80145  | 1647.872193 | 1231.246564 | 1311.998108 | 1435.498583 | 0.291576222  | 2.278713447 | 2.046861593 |
| B7LGG2 | TY-2482_chromosome | - | 4246478 | 4246675 | 1516.970255 | 1681.740881 | 1672.233948 | 1114.741218 | 1250.655695 | 1472.781351 | 0.340658961  | 2.633339951 | 2.380513889 |
| B7LGG3 | TY-2482_chromosome | + | 4246841 | 4247383 | 847.215539  | 878.8915682 | 949.385401  | 1006.723617 | 948.761989  | 1052.707714 | -0.156281925 | 0.951184139 | 0.819700475 |
| B7LGG4 | TY-2482_chromosome | + | 4247383 | 4247802 | 792.9202255 | 672.8521542 | 814.3095216 | 804.4739228 | 754.423376  | 699.7595075 | 0.060828019  | 0.077419511 | 0.061142084 |
| B7LGG5 | TY-2482_chromosome | + | 4247819 | 4248526 | 1200.014068 | 1262.240901 | 1381.765722 | 1277.920402 | 1202.829927 | 1205.116279 | 0.070884944  | 0.265759245 | 0.218859612 |
| B7LGF7 | TY-2482_chromosome | + | 4248779 | 4249756 | 1228.885451 | 1239.334097 | 1257.111841 | 1518.480645 | 1444.96886  | 1448.223112 | -0.243776365 | 1.836427726 | 1.633419893 |
| E7H755 | TY-2482_chromosome | - | 4250208 | 4250786 | 97.36150526 | 110.4829706 | 78.2759807  | 107.6729126 | 107.6256739 | 76.2563739  | -0.091248592 | 0.028934346 | 0.02977814  |
| B7LHA4 | TY-2482_chromosome | - | 4250842 | 4252557 | 7726.281514 | 6587.48534  | 7044.380224 | 6704.205569 | 6729.032469 | 6140.628357 | 0.152876107  | 0.163451142 | 0.131413661 |
| B7LHA5 | TY-2482_chromosome | - | 4252672 | 4253376 | 747.2532095 | 731.6272465 | 632.692563  | 1421.673669 | 1328.757084 | 1294.29911  | -0.965248365 | 17.37114067 | 16.74841306 |
| B7LHA6 | TY-2482_chromosome | - | 4253376 | 4253777 | 1061.095289 | 985.3768229 | 1008.671223 | 1712.406333 | 1533.868636 | 1477.395312 | -0.620913227 | 8.807678702 | 8.332380575 |
| B7LHA7 | TY-2482_chromosome | - | 4253898 | 4254710 | 5267.285597 | 4620.344418 | 4930.904601 | 3341.870968 | 3305.627304 | 3284.275838 | 0.603405916  | 2.317959006 | 2.0838758   |
| B7LHA8 | TY-2482_chromosome | - | 4254753 | 4255403 | 1411.992589 | 1295.963039 | 1268.887311 | 940.2826341 | 976.0468349 | 976.5071733 | 0.466121396  | 5.39519064  | 5.016438512 |
| B7LHA9 | TY-2482_chromosome | - | 4255399 | 4256427 | 459.6062095 | 423.75895   | 418.3022943 | 489.0588113 | 513.7921053 | 485.5267377 | -0.187489542 | 0.962481176 | 0.829700229 |
| B7LHB0 | TY-2482_chromosome | + | 4256615 | 4257184 | 2170.475931 | 2415.774359 | 2503.946319 | 1612.854282 | 1717.482801 | 1771.314979 | 0.473162142  | 4.652051535 | 4.305573265 |
| E9WNY3 | TY-2482_chromosome | - | 4257464 | 4257697 | 238348.022  | 1032083.098 | 443476.6482 | 1266.997399 | 416.9028668 | 269.363002  | 9.306443709  | 35.57407496 | 34.74149644 |

|               |                    |   |         |         |             |              |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>rrsD</b>   | TY-2482_chromosome | + | 4257551 | 4259092 | 1834688.893 | 8087459.346  | 3978306.718 | 2432.086353 | 560.6289646 | 177.5012437 | 11.6650236   | 34.07944771 | 33.25854448 |
| <b>Q57H85</b> | TY-2482_chromosome | + | 4258672 | 4258989 | 458756.3876 | 2050050.725  | 940398.349  | 172.8485233 | 121.586159  | 49.27488009 | 12.86745091  | 57.22909563 | 56.24262828 |
| <b>ileT</b>   | TY-2482_chromosome | + | 4259161 | 4259237 | 1244.209708 | 1397.778835  | 717.2142327 | 3638.025379 | 5835.799114 | 5547.814566 | -2.286784966 | 17.57557251 | 16.95064963 |
| <b>alaT</b>   | TY-2482_chromosome | + | 4259280 | 4259355 | 740.7068773 | 649.40877079 | 343.8142698 | 2391.172531 | 3712.903688 | 3552.484715 | -2.550722005 | 34.87340456 | 34.04786881 |
| <b>rrfE</b>   | TY-2482_chromosome | + | 4259539 | 4262442 | 1005440.504 | 10310132.61  | 2782373.712 | 3307.849348 | 783.1946632 | 207.9061834 | 11.33356429  | 30.38164167 | 29.60505357 |
| <b>Q1R3T8</b> | TY-2482_chromosome | - | 4259765 | 4260067 | 188755.2776 | 1544660.329  | 503245.1133 | 215.3544154 | 81.58142529 | 22.71267066 | 11.74723555  | 32.02108944 | 31.22590485 |
| <b>C1HUN3</b> | TY-2482_chromosome | - | 4261125 | 4261328 | 60754.93639 | 738344.3241  | 196891.4838 | 78.1551146  | 18.79248778 | 4.248926462 | 12.54559072  | 32.03150111 | 31.23577331 |
| <b>C1HUN1</b> | TY-2482_chromosome | - | 4261405 | 4261857 | 193403.8722 | 2169849.657  | 531592.3272 | 417.0674167 | 119.9597974 | 28.58718236 | 11.55480303  | 29.02034696 | 28.26159163 |
| <b>C1HUN0</b> | TY-2482_chromosome | - | 4261861 | 4262217 | 162603.6299 | 1648926.913  | 449281.8675 | 529.1841241 | 160.7669431 | 35.88462691 | 10.88362116  | 27.92009047 | 27.1716936  |
| <b>rrfC</b>   | TY-2482_chromosome | + | 4262536 | 4262655 | 7921.342597 | 30293.04716  | 382.2415484 | 775.7509474 | 45.07596256 | 13.87293607 | 4.604206735  | 6.222655321 | 5.818677368 |
| <b>B7LHB1</b> | TY-2482_chromosome | + | 4262760 | 4263032 | 475.2458253 | 839.343754   | 266.5409371 | 244.2724299 | 357.2556421 | 276.7796419 | 0.537435625  | 3.209057989 | 2.927090999 |
| <b>aspT</b>   | TY-2482_chromosome | + | 4262847 | 4262923 | 202.1242572 | 380.9603789  | 98.51739555 | 117.522099  | 161.6768227 | 137.5544273 | 0.363371639  | 1.83470687  | 1.631837857 |
| <b>B7LHB2</b> | TY-2482_chromosome | + | 4263085 | 4263885 | 367.7435459 | 394.0966261  | 403.5630063 | 198.9147215 | 280.5697473 | 276.7780933 | 0.629478008  | 4.879307119 | 4.521873093 |
| <b>B7LHB4</b> | TY-2482_chromosome | - | 4263888 | 4264799 | 540.3269492 | 620.5576764  | 630.4738731 | 689.9689577 | 640.7289129 | 709.6786919 | -0.198539804 | 1.03460377  | 0.895637204 |
| <b>B7LHB5</b> | TY-2482_chromosome | + | 4265040 | 4265837 | 2119.759283 | 2113.464706  | 2360.199883 | 2175.132708 | 1798.448234 | 2140.137681 | 0.131014365  | 0.465994045 | 0.388583944 |
| <b>B7LHB6</b> | TY-2482_chromosome | + | 4265918 | 4266685 | 292.3982932 | 274.1358349  | 283.0789404 | 511.5170036 | 605.7704908 | 617.2936724 | -1.011501167 | 14.51347928 | 13.93081521 |
| <b>B7LHB7</b> | TY-2482_chromosome | - | 4266739 | 4268094 | 3938.438516 | 2923.125087  | 3072.137317 | 8820.827495 | 8986.426167 | 8729.19143  | -1.375171834 | 5.23353313  | 4.861653644 |
| <b>B7LHB8</b> | TY-2482_chromosome | - | 4268169 | 4268921 | 707.7372652 | 856.4165727  | 781.6104446 | 542.8359734 | 609.3998108 | 629.6765668 | 0.360930765  | 3.189882294 | 2.908414589 |
| <b>B7LHB9</b> | TY-2482_chromosome | + | 4268955 | 4269674 | 1277.885212 | 1365.822153  | 1364.818391 | 1156.618239 | 1117.881577 | 1251.229354 | 0.180533204  | 1.174516799 | 1.023647682 |
| <b>C4X416</b> | TY-2482_chromosome | - | 4269677 | 4270252 | 1116.849047 | 1171.429251  | 1152.268079 | 1119.541565 | 1108.417946 | 1168.611492 | 0.011450782  | 0.061562472 | 0.048850507 |
| <b>D3GS43</b> | TY-2482_chromosome | + | 4270197 | 4270934 | 1322.883321 | 1230.46073   | 1310.247542 | 992.2048492 | 1065.713214 | 1161.568822 | 0.288151655  | 2.045856678 | 1.829024739 |
| <b>A1A7Q7</b> | TY-2482_chromosome | - | 4270842 | 4271153 | 542.1346724 | 534.5923277  | 394.6213732 | 517.4019423 | 602.2238417 | 550.9673103 | -0.235050486 | 0.830149084 | 0.710169813 |
| <b>aspT</b>   | TY-2482_chromosome | + | 4271070 | 4271146 | 312.693962  | 246.4071504  | 124.0537152 | 363.2444854 | 404.9804457 | 357.8495376 | -0.790005581 | 3.292392883 | 3.005569648 |
| <b>B7LHC2</b> | TY-2482_chromosome | + | 4271473 | 4272255 | 47.14916702 | 45.58924499  | 47.40303439 | 229.5489456 | 461.7580482 | 504.3878402 | -3.062457953 | 33.72454056 | 32.90822095 |
| <b>C8THN8</b> | TY-2482_chromosome | - | 4272398 | 4272874 | 21.49146263 | 26.17524235  | 24.384702   | 19.35680079 | 60.68638392 | 59.27021779 | -0.956503384 | 2.167161101 | 1.941496722 |
| <b>B7LHC3</b> | TY-2482_chromosome | - | 4272887 | 4273813 | 83.05442421 | 72.10303252  | 95.76755681 | 71.90149503 | 120.5499738 | 99.04237507 | -0.149888786 | 0.457413632 | 0.38156033  |
| <b>B7LHC4</b> | TY-2482_chromosome | - | 4273845 | 4274324 | 59.19221431 | 67.19358714  | 75.71019006 | 33.67329266 | 52.50032291 | 56.53740842 | 0.521680213  | 1.444457573 | 1.271227803 |
| <b>B7LHC5</b> | TY-2482_chromosome | - | 4274351 | 4275790 | 266.8357741 | 287.3903528  | 275.8928925 | 190.6596326 | 193.8928867 | 189.577177  | 0.514803406  | 3.712262204 | 3.406332783 |
| <b>B7LHC6</b> | TY-2482_chromosome | - | 4275714 | 4279235 | 393.8683053 | 452.5478751  | 426.7071065 | 358.7244772 | 356.6286307 | 353.0149876 | 0.224888782  | 1.330969769 | 1.167102092 |
| <b>B7LHC7</b> | TY-2482_chromosome | - | 4279257 | 4280735 | 144.8342134 | 149.8502656  | 149.408549  | 112.9093739 | 108.4862451 | 138.9531834 | 0.303516348  | 1.071109709 | 0.929499394 |
| <b>B7LHC8</b> | TY-2482_chromosome | - | 4280677 | 4281417 | 71.93475133 | 93.11439455  | 70.75302292 | 51.08735887 | 54.49558136 | 72.88976954 | 0.333607163  | 1.024443126 | 0.928631439 |
| <b>B7LHC9</b> | TY-2482_chromosome | - | 4281417 | 4284287 | 363.9251274 | 340.9702676  | 354.8909086 | 267.2079402 | 272.7174214 | 226.2558793 | 0.476008882  | 3.381762929 | 3.09121908  |
| <b>B7LHD0</b> | TY-2482_chromosome | - | 4284185 | 4284943 | 98.827229   | 90.31836433  | 89.2710843  | 65.50098033 | 75.98789099 | 82.92084723 | 0.323184557  | 0.929447711 | 0.80007855  |
| <b>B7LHD1</b> | TY-2482_chromosome | - | 4284951 | 4286279 | 206.0032152 | 189.8665566  | 181.3255197 | 141.1214038 | 185.8196428 | 166.2169804 | 0.230801053  | 0.786121417 | 0.671158993 |
| <b>B7LHD2</b> | TY-2482_chromosome | - | 4286285 | 4286806 | 66.38652457 | 80.1250342   | 46.88851362 | 38.72184865 | 39.11760766 | 47.02322837 | 0.523747588  | 1.804443978 | 1.603375582 |
| <b>B7LHD3</b> | TY-2482_chromosome | - | 4286806 | 4288104 | 138.274844  | 165.0659685  | 121.2881839 | 105.1859482 | 86.33374361 | 91.40741186 | 0.503279052  | 2.571836353 | 2.321339786 |
| <b>B7LHD4</b> | TY-2482_chromosome | - | 4288111 | 4289196 | 105.713186  | 122.2430646  | 93.88870828 | 71.36870461 | 65.30193284 | 63.23617368 | 0.617695086  | 3.04156528  | 2.768335578 |
| <b>B7LHD5</b> | TY-2482_chromosome | - | 4289157 | 4291004 | 294.7155961 | 222.3930958  | 237.380476  | 156.7893065 | 152.5444347 | 159.3608823 | 0.728415618  | 5.11357994  | 4.746530144 |
| <b>B7LHD6</b> | TY-2482_chromosome | - | 4291011 | 4291421 | 64.76104054 | 111.5339214  | 87.59872627 | 68.23149682 | 94.51802555 | 94.88873451 | -0.061843898 | 0.009511208 | 0.007418218 |
| <b>B7LHD7</b> | TY-2482_chromosome | - | 4291431 | 4292903 | 191.8475177 | 230.3108494  | 160.2476381 | 136.9704896 | 143.9247819 | 120.0145997 | 0.443465504  | 2.489172292 | 2.243757051 |
| <b>B7LHD8</b> | TY-2482_chromosome | - | 4292957 | 4293178 | 28.77906488 | 20.51305374  | 24.52154911 | 26.38879176 | 25.51502335 | 25.20216352 | -0.016439927 | 0.024662419 | 0.019322845 |
| <b>B7LHD9</b> | TY-2482_chromosome | - | 4293216 | 4293713 | 98.15028114 | 79.63529432  | 70.99445025 | 69.13014508 | 95.62639983 | 69.85830702 | 0.086387742  | 0.147445476 | 0.11876668  |
| <b>B7LHE1</b> | TY-2482_chromosome | + | 4294410 | 4294925 | 122.3292603 | 124.4373854  | 143.2737266 | 109.0789355 | 106.1671397 | 123.3910641 | 0.230519842  | 0.612505081 | 0.516828539 |
| <b>B7LHE2</b> | TY-2482_chromosome | + | 4295138 | 4297276 | 94.09252419 | 52.65740875  | 60.89638268 | 80.4670821  | 75.87046383 | 72.44119235 | -0.065190595 | 0.211860362 | 0.172550628 |
| <b>B3IHE6</b> | TY-2482_chromosome | + | 4297355 | 4300568 | 336.2159324 | 337.2005017  | 297.8113572 | 307.7705608 | 303.8280075 | 288.8490303 | 0.083269011  | 0.35538546  | 0.294400431 |
| <b>B7LHE5</b> | TY-2482_chromosome | + | 4301002 | 4301481 | 76.42248467 | 92.7358386   | 63.85624411 | 43.56308869 | 80.65182874 | 81.48881375 | 0.107602817  | 0.294618622 | 0.243421966 |
| <b>B7LHE6</b> | TY-2482_chromosome | + | 4301665 | 4302408 | 66.51832704 | 74.54538287  | 57.53081809 | 74.87995789 | 124.7736042 | 119.4121622 | -0.921952085 | 3.25786658  | 2.972746093 |
| <b>B7LHE8</b> | TY-2482_chromosome | + | 4302969 | 4304027 | 110.8916038 | 141.8829901  | 103.9477024 | 89.95471264 | 105.1274685 | 128.5488551 | 0.064816955  | 0.257425008 | 0.211396772 |
| <b>B7LHF0</b> | TY-2482_chromosome | - | 4304075 | 4304842 | 1399.382476 | 1378.286416  | 1370.721493 | 720.9728482 | 690.7505396 | 757.1229322 | 0.938146292  | 19.94628784 | 19.29645506 |
| <b>B7LHF1</b> | TY-2482_chromosome | + | 4304996 | 4305466 | 1154.699749 | 1368.468233  | 1291.571387 | 412.0953555 | 417.927828  | 415.2219649 | 1.584058024  | 50.74704651 | 49.802355   |
| <b>B7LHF2</b> | TY-2482_chromosome | - | 4305515 | 4307956 | 512.2708016 | 538.468528   | 540.1513909 | 455.4407155 | 475.0221967 | 397.1043204 | 0.250701379  | 1.520717377 | 1.341745649 |
| <b>A1A7T5</b> | TY-2482_chromosome | + | 4308034 | 4308771 | 4471.671917 | 4633.921585  | 4890.413768 | 2959.628448 | 2610.369714 | 2741.468271 | 0.756196934  | 4.053790857 | 3.732822532 |
| <b>B7LHF4</b> | TY-2482_chromosome | + | 4308980 | 4309744 | 1698.415924 | 1554.006211  | 1759.757995 | 2169.217663 | 2207.820263 | 2362.512499 | -0.391256559 | 3.860963788 | 3.54954474  |
| <b>B7LHF5</b> | TY-2482_chromosome | - | 4309721 | 4310458 | 994.8459813 | 1011.228809  | 1014.329035 | 2356.775981 | 2702.124534 | 2705.457296 | -1.359285215 | 32.22542777 | 31.42752032 |
| <b>B7LHF6</b> | TY-2482_chromosome | - | 4310617 | 4310892 | 859.5000224 | 848.5214624  | 751.8564699 | 663.5335212 | 711.6830629 | 736.8618898 | 0.202067029  | 1.353092765 | 1.18744519  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LHF7</b> | TY-2482_chromosome | - | 4310898 | 4311155 | 1064.675734 | 1146.500381 | 997.4612821 | 734.2074808 | 923.4018087 | 992.8757804 | 0.249413747  | 1.680714932 | 1.488403873 |
| <b>C8THQ7</b> | TY-2482_chromosome | + | 4311341 | 4312111 | 89.26242681 | 96.31837724 | 76.62745285 | 81.31397037 | 70.53618228 | 93.71431946 | 0.050708908  | 0.149267793 | 0.119980165 |
| <b>B7LHF9</b> | TY-2482_chromosome | - | 4312174 | 4312527 | 479.3953362 | 502.5528889 | 432.8824205 | 363.5330716 | 347.5853741 | 368.4065197 | 0.356891818  | 2.729874103 | 2.471563462 |
| <b>B7LHG0</b> | TY-2482_chromosome | - | 4312523 | 4312819 | 208.7269343 | 228.6315194 | 255.2731426 | 123.5796862 | 125.4660839 | 152.2078781 | 0.805393585  | 6.064436379 | 5.665669101 |
| <b>B7LHG1</b> | TY-2482_chromosome | - | 4312906 | 4314642 | 105.0590036 | 156.9377528 | 122.2844717 | 97.88701881 | 100.1499758 | 107.0471386 | 0.241248263  | 0.947226667 | 0.816213783 |
| <b>B7LHG3</b> | TY-2482_chromosome | + | 4315443 | 4316495 | 735.8574417 | 642.7395852 | 691.1011143 | 505.3179949 | 461.5444414 | 506.5711821 | 0.518664664  | 5.007584676 | 4.644968552 |
| <b>C8UI55</b> | TY-2482_chromosome | + | 4316495 | 4316944 | 136.7008874 | 121.9864763 | 156.1041137 | 160.1264502 | 138.5890912 | 169.4092337 | -0.118384822 | 0.445844776 | 0.371852295 |
| <b>B7L3Y7</b> | TY-2482_chromosome | + | 4317166 | 4318329 | 88.43078001 | 100.0378278 | 108.8126976 | 134.1428617 | 179.0524186 | 138.5431211 | -0.602149409 | 2.802245749 | 2.540928503 |
| <b>A1A7U7</b> | TY-2482_chromosome | + | 4318245 | 4318940 | 198.2975345 | 222.3972231 | 174.3952885 | 295.1416885 | 317.1505667 | 342.9520051 | -0.736613041 | 5.564863036 | 5.18003383  |
| <b>B7L3Y9</b> | TY-2482_chromosome | - | 4319003 | 4320457 | 14013.93773 | 14361.11825 | 14798.2096  | 13275.80466 | 12405.45787 | 12986.02505 | 0.161666305  | 0.194242962 | 0.157307726 |
| <b>B7L3Z0</b> | TY-2482_chromosome | + | 4320718 | 4321173 | 1012.319999 | 861.5746051 | 1031.284114 | 2312.557386 | 2837.763073 | 2888.903391 | -1.41167984  | 31.75890044 | 30.96857439 |
| <b>B7L3Z1</b> | TY-2482_chromosome | + | 4321268 | 4322509 | 3122.304287 | 2865.556309 | 3340.047597 | 2274.803869 | 2300.750174 | 2249.313931 | 0.488345659  | 2.216255883 | 1.988538792 |
| <b>B7L3Z2</b> | TY-2482_chromosome | + | 4322570 | 4322968 | 2300.222616 | 2487.299271 | 2422.321299 | 2610.809173 | 2541.368058 | 2654.190946 | -0.128081709 | 0.317321703 | 0.262302351 |
| <b>B7L3Z3</b> | TY-2482_chromosome | - | 4323013 | 4324065 | 96.16305425 | 83.87257334 | 115.7395866 | 98.2128299  | 116.4082801 | 146.6755764 | -0.209102389 | 0.764543593 | 0.617529746 |
| <b>B7L3Z4</b> | TY-2482_chromosome | + | 4324353 | 4325453 | 1984.50672  | 1836.984245 | 2060.046413 | 2918.007892 | 2542.539434 | 2453.35343  | -0.403912595 | 2.376933497 | 2.138202179 |
| <b>B7L3Z5</b> | TY-2482_chromosome | + | 4325468 | 4326718 | 3034.708914 | 3193.02188  | 3060.330427 | 2658.496845 | 2462.266509 | 2218.414301 | 0.319427679  | 1.379122245 | 1.210919238 |
| <b>thrW</b>   | TY-2482_chromosome | + | 4326836 | 4326911 | 403.0265849 | 613.2808356 | 547.1568704 | 40.78774548 | 44.59140872 | 56.07418603 | 3.402455528  | 82.67113847 | 81.50942234 |
| <b>D6J782</b> | TY-2482_chromosome | - | 4326973 | 4327284 | 83.40247344 | 93.70941644 | 96.05974332 | 0           | 0           | 0           | 0.1659756134 | 49.09273112 | 44.08894459 |
| <b>B3HAL5</b> | TY-2482_chromosome | - | 4328239 | 4328793 | 154.6222033 | 138.8189251 | 179.0424877 | 0           | 0           | 0           | 11.45106708  | 72.21015193 | 71.11176043 |
| <b>B3HAK2</b> | TY-2482_chromosome | + | 4334371 | 4335399 | 165.9702376 | 125.3722003 | 111.3933088 | 0           | 0           | 0           | 11.17864836  | 59.04209765 | 58.03842828 |
| <b>C8THX6</b> | TY-2482_chromosome | + | 4335786 | 4337624 | 246.3080248 | 326.1561313 | 277.3933537 | 0           | 0           | 0           | 12.17833713  | 108.359931  | 107.0946257 |
| <b>E9TCE4</b> | TY-2482_chromosome | + | 4337675 | 4338349 | 281.3157832 | 269.503345  | 301.4648878 | 0           | 0           | 0           | 12.27165021  | 118.7099796 | 117.384617  |
| <b>C8THX8</b> | TY-2482_chromosome | - | 4338436 | 4339710 | 133.2718805 | 137.606392  | 126.6442865 | 0           | 0           | 0           | 11.12778954  | 62.91856974 | 61.88021136 |
| <b>B7L3Z6</b> | TY-2482_chromosome | + | 4340038 | 4341249 | 325.7355909 | 221.2954342 | 298.637025  | 343.3002693 | 411.7023104 | 459.3409924 | -0.424082834 | 3.007153298 | 2.73555261  |
| <b>B7L3Z7</b> | TY-2482_chromosome | + | 4341375 | 4342175 | 497.8880308 | 523.6138816 | 581.4694338 | 271.2029648 | 289.8415188 | 378.7743169 | 0.796771669  | 7.957339088 | 7.5030941   |
| <b>B7L3Z9</b> | TY-2482_chromosome | + | 4342649 | 4343446 | 179.5143492 | 133.9932723 | 152.4477285 | 218.3811007 | 225.2459248 | 235.9173656 | -0.490717207 | 2.991974448 | 2.720536325 |
| <b>B7L400</b> | TY-2482_chromosome | + | 4343442 | 4345025 | 2088.488713 | 2142.432854 | 1931.304873 | 2222.37318  | 2228.36402  | 2368.895973 | -0.166790223 | 0.740445594 | 0.630218515 |
| <b>B7L405</b> | TY-2482_chromosome | + | 4345871 | 4348000 | 162.2323315 | 223.6558932 | 226.4980612 | 130.7433904 | 143.5287686 | 151.3396476 | 0.498043319  | 2.590770925 | 2.339499247 |
| <b>B7L406</b> | TY-2482_chromosome | + | 4348462 | 4349016 | 108.723073  | 84.931094   | 115.9570907 | 73.57796012 | 87.99772304 | 105.9354489 | 0.295350922  | 0.575392775 | 0.483929345 |
| <b>B7L407</b> | TY-2482_chromosome | + | 4349016 | 4349300 | 46.30007626 | 59.12156739 | 60.03091478 | 42.84336208 | 57.73962382 | 76.96060845 | -0.106647628 | 0.15104319  | 0.121340882 |
| <b>B7L408</b> | TY-2482_chromosome | + | 4349438 | 4350577 | 7891.669777 | 8599.941496 | 9237.805392 | 6493.851227 | 9076.815285 | 9184.414286 | 0.070781093  | 0.063069812 | 0.049921894 |
| <b>B7L409</b> | TY-2482_chromosome | + | 4350645 | 4350965 | 235.046736  | 301.3238174 | 289.9812638 | 128.8701    | 168.5933394 | 179.3312243 | 0.767799711  | 5.845489398 | 5.451920719 |
| <b>B7L410</b> | TY-2482_chromosome | + | 4351411 | 4351680 | 818.1074461 | 862.5306107 | 960.7416956 | 761.2701352 | 764.0954571 | 906.7475487 | 0.140839555  | 0.555537803 | 0.466003145 |
| <b>B7L411</b> | TY-2482_chromosome | + | 4351765 | 4352307 | 214.5873724 | 202.7571445 | 223.954715  | 270.9551746 | 292.5813037 | 350.7790672 | -0.479371323 | 3.232382505 | 2.948747075 |
| <b>B7L412</b> | TY-2482_chromosome | + | 4352914 | 4353906 | 716.706786  | 7611.978494 | 8375.724414 | 3211.920116 | 5372.24142  | 5770.839034 | 0.719296721  | 1.47085362  | 1.259805086 |
| <b>B7L413</b> | TY-2482_chromosome | + | 4353902 | 4354879 | 4955.726316 | 4796.449955 | 5131.857829 | 2527.611358 | 4474.372531 | 4238.178558 | 0.435478185  | 0.756125347 | 0.644775479 |
| <b>P7L299</b> | TY-2482_chromosome | + | 4355264 | 4355764 | 102.4317851 | 113.0366784 | 93.75815992 | 228.6821309 | 333.9017443 | 333.5286236 | -1.568927998 | 15.71317313 | 15.10936969 |
| <b>B7L415</b> | TY-2482_chromosome | + | 4355734 | 4356687 | 116.975212  | 116.5755757 | 112.2051555 | 156.0776968 | 213.0952425 | 197.2610572 | -0.713510264 | 4.191020041 | 3.865841452 |
| <b>B7L416</b> | TY-2482_chromosome | - | 4356700 | 4358895 | 178.7621759 | 191.2636463 | 162.7388052 | 89.6301019  | 105.286523  | 98.99203145 | 0.821700844  | 6.169039671 | 5.766991381 |
| <b>B7L417</b> | TY-2482_chromosome | - | 4358895 | 4359848 | 72.21256117 | 53.90204175 | 54.98032492 | 39.45472004 | 41.28836724 | 37.49886881 | 0.642063766  | 1.978022451 | 1.764901224 |
| <b>B7L418</b> | TY-2482_chromosome | - | 4359848 | 4360534 | 51.0060407  | 67.36640027 | 57.51343093 | 27.85479424 | 27.09129126 | 29.10049107 | 1.004842285  | 4.370878204 | 4.036966982 |
| <b>B7L419</b> | TY-2482_chromosome | + | 4360952 | 4361563 | 481.8421793 | 564.2566034 | 560.1220829 | 858.5348318 | 854.9713287 | 907.6155772 | -0.723444361 | 9.768260977 | 9.26836853  |
| <b>B3XF80</b> | TY-2482_chromosome | + | 4361571 | 4361816 | 12.74162399 | 2.819587029 | 12.74163376 | 34.46501001 | 33.64829366 | 40.00508323 | -1.652795206 | 6.994276177 | 6.570621219 |
| <b>C8U1Y0</b> | TY-2482_chromosome | - | 4361817 | 4362143 | 33.43765706 | 47.14896775 | 47.05570879 | 47.98383657 | 74.46482595 | 76.70411509 | -0.662753872 | 1.858176825 | 1.653220857 |
| <b>B7L420</b> | TY-2482_chromosome | - | 4362459 | 4363166 | 212.2862049 | 180.7792261 | 182.7300251 | 112.5123715 | 100.4930206 | 122.4817995 | 0.800925019  | 5.684328063 | 5.295044515 |
| <b>B7L421</b> | TY-2482_chromosome | - | 4363138 | 4364778 | 344.2899606 | 313.6126454 | 326.2073765 | 227.1044239 | 222.7443938 | 220.3979852 | 0.569755898  | 4.598693184 | 4.254527046 |
| <b>B7L422</b> | TY-2482_chromosome | - | 4364771 | 4367293 | 255.0589966 | 250.1418763 | 241.5426041 | 112.9582866 | 129.6892534 | 141.4225871 | 0.960668275  | 9.304267584 | 8.815487192 |
| <b>B7L423</b> | TY-2482_chromosome | - | 4367322 | 4367987 | 339.423113  | 332.5119008 | 302.0751859 | 193.8085217 | 182.0436207 | 211.7492225 | 0.716650044  | 6.853708053 | 6.433729685 |
| <b>B7L424</b> | TY-2482_chromosome | - | 4368048 | 4368632 | 731.3814268 | 743.4329398 | 698.4633157 | 231.8503846 | 244.5934203 | 256.2218206 | 1.557524922  | 39.90448034 | 39.03749232 |
| <b>B7L426</b> | TY-2482_chromosome | + | 4370072 | 4370296 | 127.7406578 | 210.4446193 | 122.9320601 | 131.4043784 | 170.076918  | 136.7928319 | -0.095372776 | 0.083271327 | 0.066147501 |
| <b>B7L427</b> | TY-2482_chromosome | - | 4370477 | 4370737 | 11.7640184  | 97.2937564  | 102.1246889 | 134.7800105 | 130.6479331 | 141.5358017 | -0.364185953 | 1.480094961 | 1.304264618 |
| <b>D3GT81</b> | TY-2482_chromosome | + | 4370794 | 4371023 | 22.95254361 | 29.27984211 | 21.80554849 | 40.81384504 | 31.56006457 | 28.84839565 | -0.5331081   | 0.84604098  | 0.725131461 |
| <b>D6JDQ4</b> | TY-2482_chromosome | + | 4372312 | 4374381 | 175.2021108 | 162.2888057 | 158.2666327 | 236.2701702 | 255.7030799 | 250.9426527 | -0.578738701 | 3.854561952 | 3.543677202 |
| <b>B7L429</b> | TY-2482_chromosome | - | 4376695 | 4377582 | 269.1084585 | 340.1226243 | 323.0892802 | 379.6630741 | 388.5042403 | 398.3359913 | -0.357909112 | 1.891113131 | 1.684200248 |
| <b>B7L430</b> | TY-2482_chromosome | - | 4378142 | 4378732 | 22.8962788  | 16.51440945 | 28.25931529 | 8.204121275 | 22.48391963 | 25.5524697  | 0.389862451  | 0.339668726 | 0.281264989 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L432</b> | TY-2482_chromosome | - | 4379092 | 4380414 | 185.9344059 | 201.1622788 | 226.5383074 | 56.23542601 | 52.04860104 | 59.65498574 | 1.883368723  | 25.63489333 | 24.91250989 |
| <b>B7L433</b> | TY-2482_chromosome | + | 4380640 | 4381491 | 54.1844799  | 68.33177439 | 60.36445992 | 174.8091735 | 172.0154132 | 204.5709558 | -1.632717193 | 14.85724179 | 14.26753224 |
| <b>B7L434</b> | TY-2482_chromosome | + | 4382021 | 4382737 | 1505.92627  | 1737.908383 | 1845.774859 | 9370.700582 | 6784.81581  | 8036.377521 | -2.256505207 | 12.17697635 | 11.63373401 |
| <b>B7L435</b> | TY-2482_chromosome | + | 4382751 | 4384175 | 2000.314457 | 2665.453213 | 2417.924497 | 15505.8633  | 12824.12741 | 15131.1892  | -2.670088596 | 13.44167421 | 12.87693854 |
| <b>B7L436</b> | TY-2482_chromosome | + | 4384171 | 4384863 | 783.9098132 | 791.9140131 | 929.0255038 | 6127.375234 | 4888.861205 | 5627.307822 | -2.704447928 | 40.00742046 | 39.13909258 |
| <b>C8T104</b> | TY-2482_chromosome | - | 4384824 | 4385033 | 159.207838  | 169.1074431 | 142.6500849 | 1206.299638 | 1462.527374 | 1204.387508 | -2.961129637 | 110.3991062 | 109.1240775 |
| <b>B7L437</b> | TY-2482_chromosome | - | 4384943 | 4385137 | 56.77103694 | 62.74883275 | 47.88721427 | 460.2105865 | 449.8406144 | 515.6560412 | -3.141510552 | 65.63757291 | 64.57678806 |
| <b>B7L438</b> | TY-2482_chromosome | - | 4385115 | 4385777 | 48.75290624 | 42.50246918 | 51.52014304 | 289.805956  | 288.8129807 | 322.6746507 | -2.61246913  | 41.93410073 | 41.05471157 |
| <b>B7L439</b> | TY-2482_chromosome | - | 4385993 | 4387660 | 2279.51299  | 2609.829351 | 2717.953417 | 1613.963041 | 1541.97306  | 1231.424103 | 0.777953383  | 10.01298832 | 9.505605465 |
| <b>B7L441</b> | TY-2482_chromosome | - | 4387677 | 4389146 | 1999.512792 | 1921.042958 | 2322.623111 | 1329.031293 | 1224.044581 | 1070.559445 | 0.81802014   | 10.84577405 | 10.32155928 |
| <b>B7L442</b> | TY-2482_chromosome | - | 4389163 | 4389747 | 841.8267972 | 780.8343409 | 848.9932862 | 472.2366334 | 456.0602128 | 441.2565928 | 0.872992     | 14.85163407 | 14.26226262 |
| <b>Q0TKV8</b> | TY-2482_chromosome | + | 4389664 | 4389876 | 221.1336687 | 231.8133526 | 215.6840039 | 120.2706793 | 119.7566162 | 131.9828813 | 0.829154382  | 7.192375478 | 6.761976321 |
| <b>B7L443</b> | TY-2482_chromosome | + | 4389876 | 4391906 | 700.105815  | 645.7260157 | 626.6847987 | 238.7628287 | 261.3289113 | 288.7502934 | 1.331713674  | 26.60573134 | 25.87265847 |
| <b>B7L444</b> | TY-2482_chromosome | + | 4392416 | 4396462 | 720.6929984 | 820.5200178 | 827.3449297 | 738.3328806 | 735.7151367 | 812.0262738 | 0.014806417  | 0.180438836 | 0.145865185 |
| <b>B7L445</b> | TY-2482_chromosome | + | 4396607 | 4397692 | 388.5839948 | 340.033558  | 444.7626847 | 647.0491167 | 660.0110661 | 668.9891461 | -0.68862785  | 8.703016664 | 8.229534044 |
| <b>B7L446</b> | TY-2482_chromosome | - | 4397740 | 4398669 | 504.5940085 | 414.8879423 | 417.0072854 | 526.4277599 | 441.4916687 | 421.579933  | -0.040417205 | 0.152714154 | 0.12291868  |
| <b>B7L448</b> | TY-2482_chromosome | + | 4399516 | 4400118 | 128.6365678 | 120.6128161 | 146.1305403 | 89.17474944 | 75.23509358 | 92.44996008 | 0.662833264  | 3.282959087 | 2.996808917 |
| <b>B7L449</b> | TY-2482_chromosome | + | 4400161 | 4401021 | 30.709673   | 48.59861352 | 58.00178718 | 27.49199099 | 28.17355325 | 26.53752722 | 0.729721504  | 1.991963283 | 1.777703669 |
| <b>B7L450</b> | TY-2482_chromosome | + | 4401014 | 4402558 | 35.57590711 | 74.90932389 | 50.38825329 | 26.96449834 | 36.4122499  | 28.7101543  | 0.650767374  | 2.14547008  | 1.922139839 |
| <b>B7L451</b> | TY-2482_chromosome | + | 4402561 | 4403976 | 55.77853787 | 65.18160545 | 64.50450397 | 44.31173775 | 33.4640538  | 34.62890066 | 0.695046169  | 2.482271954 | 2.237701129 |
| <b>B7L452</b> | TY-2482_chromosome | + | 4404122 | 4405069 | 34.78460674 | 52.99456147 | 37.60658857 | 21.3116406  | 28.6146693  | 25.30705792 | 0.632571219  | 1.850130396 | 1.646149588 |
| <b>B7L453</b> | TY-2482_chromosome | + | 4405082 | 4406461 | 54.44314573 | 38.21769493 | 43.33429505 | 182.0973403 | 159.1164865 | 159.4528739 | -1.833049673 | 17.90030456 | 17.27095759 |
| <b>B7L454</b> | TY-2482_chromosome | + | 4406733 | 4407170 | 11.90128373 | 23.91755528 | 11.87113513 | 18.77443224 | 22.5053789  | 20.67230722 | -0.552213894 | 0.424129681 | 0.353220961 |
| <b>B7L455</b> | TY-2482_chromosome | + | 4407424 | 4408407 | 103.5593906 | 86.8785154  | 93.49711695 | 87.61173455 | 100.4934196 | 100.5586525 | 0.008168276  | 0.020710792 | 0.01608669  |
| <b>B7L4X8</b> | TY-2482_chromosome | + | 4408444 | 4409940 | 95.88912272 | 106.8544246 | 85.21269406 | 144.5822871 | 128.2530078 | 148.5232825 | -0.600516799 | 2.568773225 | 2.318741061 |
| <b>B7L4X9</b> | TY-2482_chromosome | + | 4409936 | 4410904 | 212.509529  | 200.9753054 | 195.6120014 | 185.2987307 | 173.8876929 | 179.9718049 | 0.180649237  | 0.624680929 | 0.578402588 |
| <b>B7L4Y0</b> | TY-2482_chromosome | + | 4410874 | 4411857 | 315.1646778 | 334.8126968 | 272.1011253 | 252.1863695 | 264.2592015 | 282.0697335 | 0.165096337  | 0.794169794 | 0.678413101 |
| <b>B7L4Y1</b> | TY-2482_chromosome | + | 4411947 | 4412993 | 1153.618551 | 1089.298158 | 1029.019814 | 371.8359244 | 414.8492223 | 400.0972485 | 1.460762487  | 42.88260812 | 41.99590855 |
| <b>B7L4Y3</b> | TY-2482_chromosome | + | 4414466 | 4414708 | 139.7517135 | 151.8378358 | 125.4234291 | 202.929742  | 285.8791215 | 346.7682774 | -1.03005182  | 7.035925142 | 6.6108834   |
| <b>B7L4Y4</b> | TY-2482_chromosome | - | 4414731 | 4415399 | 109.6738045 | 78.67650232 | 93.49675293 | 141.2531904 | 177.6007644 | 201.1699848 | -0.813155204 | 5.162226882 | 4.793898761 |
| <b>B7L4Y5</b> | TY-2482_chromosome | + | 4415546 | 4415818 | 835.2750152 | 1256.37564  | 1061.714809 | 99.34949513 | 166.3263033 | 138.2211596 | 2.888530338  | 74.62661124 | 73.51153544 |
| <b>B7L4Y6</b> | TY-2482_chromosome | - | 4415925 | 4417508 | 85.464362   | 108.7942307 | 111.6754408 | 46.44373267 | 50.06520731 | 48.29536692 | 1.057673253  | 6.497273412 | 6.086800565 |
| <b>B7L4Y7</b> | TY-2482_chromosome | + | 4417746 | 4418633 | 18.37805926 | 3.115234812 | 10.36514994 | 20.57394953 | 31.89804794 | 19.0806859  | -0.906477253 | 2.512085174 | 2.26482905  |
| <b>B7L4Y8</b> | TY-2482_chromosome | + | 4418681 | 4419847 | 25.06967359 | 18.62602102 | 41.98846212 | 36.41427199 | 39.52694844 | 50.56450888 | -0.410811825 | 1.172542846 | 1.021796846 |
| <b>B7L4Y9</b> | TY-2482_chromosome | + | 4419884 | 4421332 | 38.92079575 | 38.69499097 | 36.08460391 | 40.39210871 | 42.76098632 | 44.83301822 | -0.182608048 | 0.27637835  | 0.227536182 |
| <b>B7L4Z0</b> | TY-2482_chromosome | + | 4421375 | 4423258 | 128.6058383 | 137.5654728 | 130.8130632 | 160.64916   | 151.7751644 | 148.4674396 | -0.235319141 | 0.698519321 | 0.59316319  |
| <b>B7L4Z2</b> | TY-2482_chromosome | + | 4423687 | 4424943 | 973.6774811 | 1125.786307 | 846.9429868 | 188.0158026 | 252.0454451 | 237.8255128 | 2.052145379  | 55.49011077 | 54.5185634  |
| <b>B7L4Z3</b> | TY-2482_chromosome | + | 4424936 | 4426216 | 2327.391541 | 2289.019471 | 2228.524326 | 586.6247519 | 598.1311934 | 548.8816162 | 1.975297443  | 83.57338786 | 82.40531298 |
| <b>B7L4Z4</b> | TY-2482_chromosome | - | 4426262 | 4427158 | 240.5341143 | 148.6471224 | 181.3273555 | 200.1491609 | 231.1448219 | 220.5669848 | -0.108961696 | 0.503993198 | 0.421094829 |
| <b>B7L4Z5</b> | TY-2482_chromosome | + | 4427268 | 4427924 | 45.72061173 | 45.78871133 | 50.12209712 | 50.36651323 | 47.11766119 | 38.92078273 | 0.057674206  | 0.071152768 | 0.056105398 |
| <b>B7L4Z6</b> | TY-2482_chromosome | + | 4427958 | 4428425 | 57.97473374 | 47.33484333 | 49.06657122 | 38.45533826 | 50.62374378 | 42.64362036 | 0.252359235  | 0.45746444  | 0.38156033  |
| <b>B7L4Z7</b> | TY-2482_chromosome | + | 4428461 | 4429612 | 99.25498828 | 92.2142896  | 107.4886865 | 79.87211601 | 77.12893387 | 95.02524659 | 0.28412276   | 0.71491878  | 0.608010132 |
| <b>D3GTD3</b> | TY-2482_chromosome | - | 4429721 | 4430380 | 44.96305831 | 39.48062721 | 34.88635023 | 41.32916531 | 50.78808335 | 46.47927515 | -0.222390895 | 0.363522484 | 0.300429956 |
| <b>B7L4Z9</b> | TY-2482_chromosome | - | 4430398 | 4431648 | 48.35797417 | 51.3816619  | 35.14862146 | 59.76380104 | 52.600738   | 68.28704891 | -0.483970775 | 1.061235861 | 0.920107427 |
| <b>B7L500</b> | TY-2482_chromosome | - | 4431703 | 4434774 | 312.4739415 | 391.2605542 | 292.2297578 | 521.894251  | 471.3085727 | 484.1734903 | -0.655347997 | 4.828516692 | 4.474044449 |
| <b>B7L501</b> | TY-2482_chromosome | - | 4434900 | 4435979 | 403.1417199 | 365.9177611 | 437.8158101 | 619.5573005 | 644.6767474 | 733.9930534 | -0.67859627  | 8.318760454 | 7.854750001 |
| <b>B7L502</b> | TY-2482_chromosome | - | 4436059 | 4437003 | 105.8031203 | 93.97028696 | 120.2249445 | 183.7596388 | 162.1656735 | 154.6890623 | -0.59826371  | 3.413722205 | 3.132788087 |
| <b>B7L503</b> | TY-2482_chromosome | + | 4437080 | 4438741 | 40.88845569 | 47.4917106  | 41.77881544 | 45.95270499 | 32.85527556 | 37.07489345 | 0.122460659  | 0.245455182 | 0.200586096 |
| <b>B7L504</b> | TY-2482_chromosome | + | 4438746 | 4439687 | 26.99422239 | 40.94000934 | 39.87231609 | 49.93964409 | 48.54809139 | 37.41455841 | -0.38651909  | 0.632297315 | 0.533796678 |
| <b>B7L505</b> | TY-2482_chromosome | + | 4439693 | 4440571 | 95.96135378 | 91.19135712 | 100.4260423 | 77.49870265 | 94.44817299 | 71.64076577 | 0.255712414  | 0.665765199 | 0.563097058 |
| <b>B7L506</b> | TY-2482_chromosome | + | 4440584 | 4441390 | 99.52088911 | 63.1700901  | 76.41242174 | 58.26095579 | 68.91290872 | 59.59755029 | 0.427467209  | 1.065775002 | 0.924405694 |
| <b>B7L507</b> | TY-2482_chromosome | + | 4441390 | 4442337 | 81.31169795 | 132.7594774 | 131.5452629 | 82.00663789 | 61.46594    | 64.04254795 | 0.678394951  | 3.014789327 | 2.742374896 |
| <b>B7L508</b> | TY-2482_chromosome | + | 4442337 | 4443347 | 113.6955054 | 94.75875984 | 121.7553592 | 82.48173691 | 69.21662721 | 54.67804145 | 0.724124693  | 3.180903101 | 2.900100218 |
| <b>B7L509</b> | TY-2482_chromosome | + | 4443526 | 4444734 | 174.4929456 | 189.4562972 | 206.5257043 | 148.1992477 | 168.8374411 | 173.4095157 | 0.229459603  | 0.759996527 | 0.64797159  |
| <b>B7L510</b> | TY-2482_chromosome | + | 4444839 | 4445375 | 696.4835334 | 877.4349259 | 781.6294066 | 674.5433346 | 626.1599972 | 656.499986  | 0.216516851  | 1.644618214 | 1.454274817 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7L512 | TY-2482_chromosome | - | 4445608 | 4446438 | 529.1012131 | 412.3010108 | 479.8579586 | 653.0973451 | 667.2173484 | 655.9738471 | -0.422532732 | 3.959341679 | 3.643084145 |
| B7L513 | TY-2482_chromosome | - | 4446534 | 4447640 | 1435.07012  | 1416.566125 | 1363.642923 | 1506.164214 | 1562.721878 | 1523.331137 | -0.129202215 | 0.665592321 | 0.563034364 |
| Q1RFI5 | TY-2482_chromosome | + | 4447720 | 4448019 | 354.9450031 | 413.6805803 | 395.0348827 | 439.9436322 | 410.1201811 | 420.702593  | -0.154699174 | 0.545028941 | 0.456378124 |
| B7L515 | TY-2482_chromosome | - | 4448139 | 4448909 | 66.79963338 | 67.45732205 | 70.31839987 | 45.89770854 | 49.95928978 | 51.75353806 | 0.476540459  | 1.440064805 | 1.267482753 |
| B7L517 | TY-2482_chromosome | - | 4449473 | 4450666 | 32.96891943 | 34.89287821 | 41.30111126 | 27.35412614 | 33.30505075 | 56.27331523 | -0.057310569 | 0.115780659 | 0.092459303 |
| B7L520 | TY-2482_chromosome | + | 4452938 | 4453702 | 58.52218923 | 60.34152796 | 56.18218189 | 30.49760547 | 23.4154413  | 25.60969173 | 1.113362945  | 5.113830531 | 4.746578125 |
| B7NJD4 | TY-2482_chromosome | + | 4454257 | 4454526 | 19.31778802 | 14.41238493 | 18.62566338 | 21.47792232 | 22.28122073 | 14.36814612 | -0.109905595 | 0.128963591 | 0.103802118 |
| B7NJD4 | TY-2482_chromosome | + | 4454592 | 4455374 | 141.8982014 | 168.3176936 | 150.9436847 | 180.6542114 | 191.1904914 | 211.3247523 | -0.373434293 | 1.472594377 | 1.297155114 |
| B7L523 | TY-2482_chromosome | - | 4455486 | 4456457 | 3736.358953 | 3282.288574 | 3682.209461 | 3052.506085 | 3003.826189 | 3104.42396  | 0.260420844  | 0.620282906 | 0.522981225 |
| B7L524 | TY-2482_chromosome | + | 4456981 | 4459866 | 621.9994203 | 552.5129646 | 556.2324371 | 416.0633216 | 406.8044268 | 518.4331783 | 0.390467762  | 2.547725852 | 2.298466592 |
| B7L525 | TY-2482_chromosome | + | 4459912 | 4460577 | 24.65280839 | 20.93383962 | 31.14693377 | 51.00766258 | 52.97701186 | 38.24447536 | -0.829912147 | 2.616935428 | 2.364265055 |
| B7L526 | TY-2482_chromosome | - | 4460584 | 4461738 | 493.6244221 | 411.0023221 | 469.7357952 | 870.4321779 | 807.7462444 | 728.6333463 | -0.771064083 | 10.7352349  | 10.21305158 |
| B7L527 | TY-2482_chromosome | + | 4461876 | 4462067 | 155.336992  | 209.8640924 | 181.0487498 | 207.5218102 | 224.6220381 | 268.3420643 | -0.412722277 | 1.580472848 | 1.395549027 |
| B7L528 | TY-2482_chromosome | + | 4462090 | 4463307 | 387.0218087 | 379.9746034 | 416.4189012 | 786.7839552 | 781.1712099 | 808.5173731 | -0.985968667 | 17.6717494  | 17.04535683 |
| B7L529 | TY-2482_chromosome | + | 4463323 | 4464414 | 728.5950139 | 793.2994138 | 791.5373968 | 1119.981861 | 1101.278356 | 1156.609885 | -0.55487811  | 6.810190598 | 6.39135481  |
| B7L530 | TY-2482_chromosome | - | 4464479 | 4464784 | 74.82356473 | 92.27291938 | 62.43547788 | 115.2101325 | 119.2900369 | 139.1911649 | -0.789435073 | 3.29212675  | 3.005471879 |
| B7L531 | TY-2482_chromosome | + | 4464912 | 4465253 | 527.3261383 | 649.9964337 | 574.7936743 | 426.8588332 | 427.069086  | 436.0237874 | 0.393538471  | 3.485008681 | 3.188995487 |
| B7L532 | TY-2482_chromosome | - | 4465283 | 4466374 | 3954.521958 | 3879.155071 | 4052.933552 | 3236.429045 | 2956.249323 | 3044.395278 | 0.372554766  | 1.256064473 | 1.099369141 |
| P71314 | TY-2482_chromosome | - | 4466689 | 4466937 | 650.7907442 | 752.9121808 | 732.6167511 | 211.1754138 | 188.6511059 | 220.4089132 | 1.763993644  | 45.63631593 | 44.72902982 |
| B7L534 | TY-2482_chromosome | + | 4466837 | 4467094 | 1250.307192 | 1418.471131 | 1286.029989 | 378.5956132 | 383.957337  | 378.3579435 | 1.758880497  | 64.5249722  | 63.47310135 |
| C8U269 | TY-2482_chromosome | + | 4467198 | 4468610 | 1327.906106 | 1354.477702 | 1276.018495 | 299.3382867 | 320.7061082 | 317.25185   | 2.0657939    | 86.61897781 | 85.43789913 |
| B7L539 | TY-2482_chromosome | + | 4468732 | 4469049 | 373.9762864 | 393.0601879 | 372.238685  | 97.94137488 | 93.9215408  | 90.92264367 | 1.990461717  | 42.63403772 | 41.75001074 |
| B7L540 | TY-2482_chromosome | + | 4469154 | 4470266 | 132.324185  | 86.73790071 | 116.3164777 | 264.2085435 | 260.9675854 | 255.3563685 | -1.133323901 | 11.44268802 | 10.90936081 |
| B7L541 | TY-2482_chromosome | - | 4470289 | 4471095 | 1453.074647 | 1503.799698 | 1385.260369 | 1899.815162 | 1909.3042   | 1814.119848 | -0.394558421 | 3.342749449 | 3.053900741 |
| D8CGU2 | TY-2482_chromosome | + | 4471095 | 4471670 | 521.316523  | 766.380461  | 597.9352298 | 1096.353231 | 997.8357722 | 1071.825275 | -0.845558669 | 8.834449376 | 8.358110399 |
| B7L543 | TY-2482_chromosome | + | 4471856 | 4472377 | 1356.988774 | 1343.719613 | 1251.680167 | 2461.322232 | 2502.395541 | 2664.499703 | -0.958084026 | 16.71640092 | 16.10377363 |
| Q1RFF5 | TY-2482_chromosome | - | 4472373 | 4472699 | 1238.958506 | 1434.206352 | 1263.106596 | 1408.401723 | 1334.209615 | 1320.173765 | -0.090180675 | 0.212661568 | 0.17306602  |
| B7L545 | TY-2482_chromosome | + | 4472879 | 4473553 | 513.4469273 | 454.6576707 | 524.1856093 | 1058.257268 | 1174.01246  | 1090.504497 | -1.115642622 | 24.6855943  | 23.97229685 |
| B7L546 | TY-2482_chromosome | + | 4473628 | 4473909 | 1510.431388 | 1713.462045 | 1600.5747   | 2220.489076 | 2026.375611 | 2103.404187 | -0.426036121 | 3.477363706 | 3.181866199 |
| C6U226 | TY-2482_chromosome | + | 4474092 | 4474532 | 50.61869428 | 32.13341046 | 30.79643262 | 68.67122203 | 80.70013265 | 68.73939234 | -0.903245129 | 3.649637223 | 3.347038432 |
| B7L548 | TY-2482_chromosome | - | 4474616 | 4475524 | 940.9970586 | 859.5110865 | 971.0102761 | 640.6219395 | 698.1965849 | 629.9700661 | 0.524519348  | 5.726727895 | 5.336163242 |
| B7L549 | TY-2482_chromosome | + | 4475649 | 4476554 | 927.291078  | 1071.188755 | 1133.172837 | 481.284071  | 416.9009973 | 380.0391353 | 1.280467283  | 28.18780191 | 27.43450324 |
| B7L550 | TY-2482_chromosome | - | 4476703 | 4477884 | 464.768728  | 481.0306278 | 425.6361432 | 421.2340122 | 407.5160289 | 451.4898813 | 0.074653261  | 0.346785785 | 0.287399633 |
| B7L551 | TY-2482_chromosome | - | 4478013 | 4481153 | 1426.5658   | 1199.841667 | 1360.503479 | 897.8194001 | 859.8645824 | 772.4157362 | 0.692499321  | 9.303485563 | 8.514994002 |
| B7L552 | TY-2482_chromosome | - | 4481153 | 4482352 | 424.7298404 | 515.8898272 | 429.8885754 | 724.9552651 | 758.0842386 | 703.2094867 | -0.732061872 | 8.015084851 | 7.559190318 |
| B7L553 | TY-2482_chromosome | + | 4482542 | 4483228 | 235.5012154 | 223.4776999 | 224.239781  | 246.5489318 | 261.3368796 | 231.6318547 | -0.111139351 | 0.359739289 | 0.297651608 |
| B7L688 | TY-2482_chromosome | + | 4483289 | 4484581 | 261.6780437 | 242.2949554 | 272.772819  | 366.1077703 | 384.0762992 | 445.4194249 | -0.586178165 | 5.186890635 | 4.817606913 |
| B7L634 | TY-2482_chromosome | + | 4484991 | 4486307 | 2237.771148 | 1943.787144 | 2205.234641 | 2634.545854 | 2755.662338 | 2720.397584 | -0.305202159 | 1.422187928 | 1.251027463 |
| B7L635 | TY-2482_chromosome | + | 4486386 | 4487756 | 873.3947889 | 641.4699596 | 761.4996374 | 1465.999348 | 1588.350041 | 1592.137811 | -0.963965106 | 18.23861721 | 17.60741349 |
| B7L636 | TY-2482_chromosome | + | 4487915 | 4489729 | 1325.503181 | 1585.833428 | 1564.380877 | 704.8070689 | 639.2278285 | 515.4857415 | 1.233791447  | 26.08487121 | 25.35787248 |
| B7L637 | TY-2482_chromosome | - | 4489740 | 4490318 | 425.8639429 | 372.8072079 | 469.3156696 | 393.096623  | 411.6002562 | 427.9067035 | 0.098881283  | 0.169725414 | 0.137031828 |
| B7L638 | TY-2482_chromosome | + | 4490411 | 4491478 | 879.0176873 | 860.1954392 | 780.5314859 | 2198.896634 | 2492.390818 | 2400.951856 | -1.506204319 | 38.38380236 | 37.52688725 |
| B7L639 | TY-2482_chromosome | + | 4491537 | 4492661 | 7127.432531 | 7240.093434 | 7791.136917 | 4088.794268 | 4202.128219 | 3955.366881 | 0.866647711  | 2.349265316 | 2.112789297 |
| B7L640 | TY-2482_chromosome | + | 4492687 | 4493016 | 9895.247297 | 9906.402708 | 10364.4475  | 4408.960032 | 4108.864501 | 4424.860621 | 1.229908816  | 3.929590411 | 3.615131201 |
| B7L641 | TY-2482_chromosome | + | 4493047 | 4494891 | 13551.87842 | 12723.66244 | 12978.06302 | 9105.915687 | 8901.972026 | 8705.65314  | 0.564631552  | 1.027433885 | 0.889065933 |
| B7L642 | TY-2482_chromosome | + | 4494905 | 4495873 | 9784.136819 | 8725.136349 | 9120.450802 | 3458.032947 | 3435.359698 | 3320.078298 | 1.455461109  | 5.424973556 | 5.045179705 |
| B7L643 | TY-2482_chromosome | + | 4496005 | 4496349 | 1061.073331 | 1026.564471 | 1058.58696  | 692.5792097 | 704.5276113 | 800.115247  | 0.418691652  | 4.024760348 | 3.705290593 |
| B7L644 | TY-2482_chromosome | - | 4496532 | 4497413 | 5132.845614 | 5023.342229 | 5172.201549 | 11869.73003 | 10318.68327 | 10245.90392 | -1.07802128  | 3.112409007 | 2.835409221 |
| C8TJ02 | TY-2482_chromosome | - | 4497715 | 4498251 | 227.1907274 | 207.3450738 | 207.0765524 | 150.3168605 | 180.6089145 | 192.0702674 | 0.311158831  | 1.245097509 | 1.089399409 |
| B7L647 | TY-2482_chromosome | + | 4498402 | 4498848 | 1889.762696 | 1658.822165 | 1721.344303 | 1501.921881 | 1502.18807  | 1480.485184 | 0.253726449  | 1.544023695 | 1.362945016 |
| B7L648 | TY-2482_chromosome | + | 4498855 | 4499955 | 4168.671233 | 3736.766596 | 3992.675914 | 3944.593495 | 3836.076357 | 3641.767144 | 0.080622225  | 0.121388378 | 0.109741919 |
| A1A885 | TY-2482_chromosome | + | 4499951 | 4500514 | 5213.923583 | 4929.407938 | 5044.415224 | 6283.223117 | 7209.185515 | 7137.517138 | -0.427327012 | 0.839804179 | 0.719365943 |
| A1A886 | TY-2482_chromosome | - | 4500510 | 4501040 | 4501.4183   | 3688.390879 | 3975.57204  | 6067.490156 | 6164.062289 | 6147.931176 | -0.558963799 | 1.357341541 | 1.191311608 |
| B7L651 | TY-2482_chromosome | + | 4501034 | 4502008 | 1179.710827 | 1048.412828 | 1152.18296  | 1520.8917   | 1630.475733 | 1510.293463 | -0.434085044 | 5.174025842 | 4.805352514 |
| B7L652 | TY-2482_chromosome | + | 4501989 | 4502504 | 827.2263485 | 795.8980316 | 816.0816405 | 869.532126  | 957.4524332 | 897.6281485 | -0.150268366 | 0.895135418 | 0.768918831 |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |              |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| B7L653 | TY-2482_chromosome | - | 4502564 | 4503535 | 1293.784643 | 1214.37916  | 1350.308849 | 810.3433582 | 826.2660366 | 805.0964895 | 0.68646991   | 10.33347077 | 9.82130457   |
| B7L654 | TY-2482_chromosome | - | 4503593 | 4505452 | 2707.070106 | 2178.265099 | 2449.655025 | 4587.645367 | 4358.107402 | 3963.813056 | -0.775502741 | 4.485308829 | 4.145730352  |
| B7L655 | TY-2482_chromosome | - | 4505480 | 4506376 | 1913.313722 | 1385.447086 | 1543.314129 | 3806.84814  | 3263.064142 | 3002.367516 | -1.009848176 | 8.353060151 | 7.887019095  |
| B7L656 | TY-2482_chromosome | - | 4506379 | 4506618 | 781.1717021 | 685.8009504 | 678.4319077 | 1595.221055 | 1495.756505 | 1465.592194 | -1.076598959 | 23.89515112 | 23.19207284  |
| B7L657 | TY-2482_chromosome | + | 4506824 | 4508269 | 1422.848342 | 1191.824606 | 1146.978485 | 1298.584426 | 3488.350741 | 3197.747209 | -1.341086664 | 28.03747305 | 27.8663219   |
| B7L658 | TY-2482_chromosome | - | 4508329 | 4508916 | 1310.374211 | 1388.372835 | 1400.718344 | 1243.865559 | 1244.583214 | 1409.19976  | 0.056904125  | 0.242168423 | 0.1927974082 |
| B7L659 | TY-2482_chromosome | - | 4508882 | 4509790 | 1528.262935 | 1616.927628 | 1699.416798 | 1359.148966 | 1236.449565 | 1418.319409 | 0.276934746  | 2.055523396 | 1.838117743  |
| B7L660 | TY-2482_chromosome | + | 4509958 | 4510446 | 6278.992634 | 6621.338026 | 6590.242775 | 4947.04541  | 4927.779254 | 5060.12962  | 0.377963351  | 0.70090645  | 0.59536364   |
| B7L661 | TY-2482_chromosome | - | 4510580 | 4511941 | 497.2183276 | 519.0269732 | 440.1205546 | 1014.954417 | 1151.704081 | 1123.906306 | -1.209237528 | 25.05378286 | 24.33687379  |
| B7L662 | TY-2482_chromosome | + | 4512289 | 4513281 | 76.69029943 | 98.03579417 | 70.88484498 | 53.60548063 | 57.59996637 | 70.75456308 | 0.353866062  | 1.175405048 | 1.024285092  |
| B7L663 | TY-2482_chromosome | - | 4513343 | 4513882 | 323.0698785 | 267.0916937 | 318.7616599 | 382.3148224 | 353.2734806 | 395.2624309 | -0.262868879 | 1.631038298 | 1.441966244  |
| B7L664 | TY-2482_chromosome | - | 4513869 | 4514243 | 315.5214907 | 312.9275107 | 338.8616112 | 331.9644564 | 298.93431   | 361.4660681 | -0.017908846 | 0.090124138 | 0.071095707  |
| B5Z3T4 | TY-2482_chromosome | - | 4514365 | 4515297 | 46961.57741 | 53462.25605 | 51712.16378 | 15166.75349 | 14416.30414 | 14839.95273 | 1.754008808  | 5.714275973 | 5.324138775  |
| B7L666 | TY-2482_chromosome | - | 4515267 | 4515593 | 20460.15143 | 21936.99891 | 21624.19337 | 4610.541135 | 4349.865237 | 4442.614246 | 2.244151452  | 9.779574789 | 9.27940211   |
| B7L667 | TY-2482_chromosome | - | 4515596 | 4516207 | 30977.48693 | 30045.84486 | 32648.05428 | 7135.235821 | 6140.53633  | 6304.220994 | 2.273717348  | 9.150066678 | 8.666105999  |
| B7L668 | TY-2482_chromosome | - | 4516200 | 4518188 | 72803.72426 | 67234.02821 | 71852.26074 | 16671.4488  | 16149.8067  | 16252.35205 | 2.130961598  | 7.480975789 | 7.039899639  |
| B7L669 | TY-2482_chromosome | - | 4518213 | 4519157 | 27253.55288 | 25495.97106 | 26694.44198 | 8730.833043 | 9299.135229 | 9048.797694 | 1.569884034  | 4.920575292 | 4.561950873  |
| B7L670 | TY-2482_chromosome | - | 4519620 | 4521092 | 1554.543465 | 1206.709384 | 1366.408583 | 2400.065118 | 2506.132924 | 2328.352458 | -0.761078956 | 10.95008233 | 10.162470245 |
| B7L671 | TY-2482_chromosome | - | 4521139 | 4521714 | 1738.487017 | 1600.10119  | 1441.557173 | 2520.272502 | 2489.054853 | 2481.840294 | -0.657889621 | 7.949358639 | 7.495855824  |
| B7L672 | TY-2482_chromosome | + | 4522019 | 4522333 | 5781.606025 | 6456.663134 | 5630.862409 | 2319.445042 | 2495.841776 | 2617.135413 | 1.229410053  | 6.921861448 | 6.5002784    |
| Q1RFA2 | TY-2482_chromosome | - | 4522266 | 4522685 | 7850.304513 | 8450.301972 | 6806.419127 | 4485.044695 | 5494.538102 | 5134.729426 | 0.565182256  | 1.309918005 | 1.14820187   |
| B7L673 | TY-2482_chromosome | + | 4522680 | 4523975 | 42541.70692 | 41228.271   | 43465.3056  | 30372.29904 | 31024.35986 | 29892.96644 | 0.491879649  | 0.71624201  | 0.621292926  |
| B7L674 | TY-2482_chromosome | + | 4524224 | 4524844 | 10166.39929 | 8971.983493 | 10711.89428 | 8669.731802 | 8236.653971 | 8690.723477 | 0.268697022  | 0.30510297  | 0.251820693  |
| E0QWE8 | TY-2482_chromosome | - | 4524749 | 4524946 | 3752.711986 | 3348.811998 | 3784.161774 | 3323.160178 | 3436.081165 | 3632.23011  | 0.105352368  | 0.139632845 | 0.112901353  |
| B7L675 | TY-2482_chromosome | + | 4524973 | 4526244 | 16437.09134 | 15430.68808 | 17208.91818 | 17662.12059 | 17414.10564 | 17726.5858  | -0.077702488 | 0.119021701 | 0.095332726  |
| B7L676 | TY-2482_chromosome | + | 4526435 | 4528786 | 14583.65013 | 12719.83492 | 13287.01121 | 8975.700821 | 9102.675927 | 8733.733611 | 0.620748405  | 1.141474782 | 0.993061394  |
| B7L677 | TY-2482_chromosome | + | 4528998 | 4529267 | 20221.73693 | 25254.57759 | 22810.9906  | 16618.64925 | 18415.69978 | 17708.17115 | 0.32767249   | 0.535945801 | 0.448650604  |
| B7L678 | TY-2482_chromosome | + | 4529462 | 4531330 | 9074.126911 | 8353.010803 | 9068.538017 | 15321.21857 | 14963.69891 | 14340.65352 | -0.729747712 | 1.594521656 | 1.408264049  |
| B7L679 | TY-2482_chromosome | + | 4531484 | 4531852 | 112.7007655 | 135.2910227 | 123.5728667 | 220.88017   | 249.9036856 | 205.2263352 | -0.903772667 | 6.565232243 | 6.15273994   |
| B7L680 | TY-2482_chromosome | + | 4531949 | 4532344 | 115.6250863 | 109.1456978 | 130.366866  | 188.7998893 | 181.0138286 | 155.3879012 | -0.53499858  | 2.842778046 | 2.57939155   |
| B7L681 | TY-2482_chromosome | - | 4532402 | 4533094 | 634.8856991 | 770.0796832 | 799.8384991 | 733.0868373 | 705.9678867 | 608.3745441 | 0.087101498  | 0.41556411  | 0.345291648  |
| B7L682 | TY-2482_chromosome | - | 4533162 | 4534859 | 375.4295588 | 377.3839563 | 362.2117953 | 428.5895861 | 332.8799405 | 440.2373497 | -0.114208794 | 0.382476452 | 0.316225507  |
| D3GV76 | TY-2482_chromosome | + | 4534947 | 4535774 | 1220.238572 | 1113.156749 | 1117.957443 | 2266.056141 | 1884.341579 | 1949.876402 | -0.815138789 | 12.17927133 | 11.63572496  |
| B7L684 | TY-2482_chromosome | + | 4535702 | 4536385 | 997.5472196 | 949.7189765 | 868.1950518 | 957.5009683 | 943.4462562 | 1019.081251 | -0.061189069 | 0.213950377 | 0.173973451  |
| B7L685 | TY-2482_chromosome | + | 4536418 | 4538187 | 1622.630375 | 1250.575944 | 1349.341723 | 1621.560471 | 1787.724783 | 1776.750642 | -0.251150427 | 1.89622372  | 1.688750095  |
| B7L686 | TY-2482_chromosome | + | 4538183 | 4539961 | 947.4774812 | 933.4191558 | 905.3028815 | 1303.537002 | 1345.82775  | 1280.598156 | -0.501259116 | 6.169550815 | 5.767282908  |
| B7L687 | TY-2482_chromosome | + | 4540145 | 4540480 | 6.566443392 | 1.756072043 | 8.371219849 | 14.84823111 | 26.42759069 | 22.73539288 | -1.654942616 | 4.655086728 | 4.308415224  |
| B7L689 | TY-2482_chromosome | + | 4540513 | 4541796 | 197.0362297 | 206.1616448 | 218.170029  | 188.9368013 | 203.7997051 | 187.6154797 | 0.102686643  | 0.283267611 | 0.23354819   |
| B7L690 | TY-2482_chromosome | - | 4541851 | 4542708 | 712.3078736 | 734.7146762 | 801.3803262 | 790.3877781 | 793.4256203 | 799.2180558 | -0.07032428  | 0.357537367 | 0.296251893  |
| B7L691 | TY-2482_chromosome | + | 4542926 | 4543495 | 3109.827882 | 3382.858763 | 3518.304418 | 1156.817557 | 1273.82672  | 1201.044042 | 1.461969751  | 37.82645914 | 36.97390259  |
| B7L692 | TY-2482_chromosome | - | 4543532 | 4543918 | 281.0556304 | 253.7270664 | 284.3249015 | 336.3873526 | 291.6160738 | 372.6693543 | -0.253338586 | 1.34162474  | 1.177249264  |
| B7MDX7 | TY-2482_chromosome | + | 4543822 | 4544157 | 6541.355306 | 1769.554125 | 412.6417163 | 3726.835641 | 4800.64294  | 2698.870869 | -0.280912224 | 0.346375828 | 0.287189122  |
| ffs    | TY-2482_chromosome | + | 4543995 | 4544108 | 6482.745447 | 1736.34932  | 383.9056861 | 3639.883539 | 4698.746309 | 2570.804445 | -0.259774615 | 0.314974372 | 0.260349833  |
| B7L693 | TY-2482_chromosome | + | 4544219 | 4544569 | 173.7868824 | 171.9349577 | 162.5612403 | 417.2941694 | 509.7470571 | 609.332045  | -1.592489251 | 23.45277019 | 22.75666167  |
| B7L694 | TY-2482_chromosome | - | 4544617 | 4546164 | 1314.738397 | 1240.730246 | 1275.859128 | 1193.446691 | 1151.970197 | 1231.689322 | 0.112041867  | 0.519308136 | 0.433923328  |
| D3GV87 | TY-2482_chromosome | - | 4546331 | 4546837 | 1307.009073 | 1317.893919 | 1396.3239   | 1334.496108 | 1450.077472 | 1594.858088 | -0.10692039  | 0.610335724 | 0.51498886   |
| B7L696 | TY-2482_chromosome | - | 4546917 | 4547465 | 713.7306131 | 795.6628887 | 682.8011193 | 727.7674642 | 846.9078818 | 899.19965   | -0.210312144 | 0.965723205 | 0.832351301  |
| B7L697 | TY-2482_chromosome | - | 4547639 | 4548100 | 3243.218436 | 3993.215781 | 3386.631005 | 1754.242763 | 2140.650884 | 2286.007669 | 0.731533387  | 5.063574419 | 4.699149988  |
| B7L699 | TY-2482_chromosome | - | 4548803 | 4551949 | 27945.9655  | 25569.43305 | 28128.16477 | 10066.76303 | 9951.063996 | 9556.388041 | 1.49092928   | 4.413363719 | 4.077191588  |
| B7L6A0 | TY-2482_chromosome | - | 4551975 | 4553165 | 6973.273378 | 7566.242536 | 7931.914328 | 5469.060267 | 5036.370671 | 4957.575079 | 0.536414153  | 1.103078668 | 0.958201601  |
| B7L6A1 | TY-2482_chromosome | + | 4553307 | 4553951 | 921.9479556 | 1040.731808 | 938.3648908 | 1066.690765 | 1088.724096 | 1166.908124 | -0.226978865 | 1.271659048 | 1.113839085  |
| B7L7E3 | TY-2482_chromosome | + | 4554082 | 4557441 | 2937.780104 | 2404.767657 | 2537.478741 | 3393.602359 | 3475.672705 | 3419.199702 | -0.352270178 | 1.399129626 | 1.229900221  |
| B7L792 | TY-2482_chromosome | - | 4557834 | 4558358 | 609.5146471 | 631.5757197 | 579.2583184 | 651.5205021 | 642.2398297 | 672.2759459 | -0.13062388  | 0.53558607  | 0.448397226  |
| B7L793 | TY-2482_chromosome | + | 4558428 | 4558802 | 331.3227926 | 297.7445281 | 321.800189  | 249.2907533 | 233.220126  | 271.1381447 | 0.363674164  | 1.944569035 | 1.734139579  |
| B7L794 | TY-2482_chromosome | + | 4558958 | 4559506 | 946.9863628 | 814.7631006 | 849.2705767 | 2552.373687 | 3213.510404 | 3104.639865 | -1.734447986 | 44.87852219 | 43.9754322   |

|                |                    |   |         |         |             |             |             |             |             |             |              |              |             |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| <b>B7L795</b>  | TY-2482_chromosome | + | 4559638 | 4561566 | 3601.550863 | 3385.080527 | 3456.846    | 6233.585211 | 6296.296816 | 6090.701246 | -0.824248292 | 2.358226729  | 2.121000244 |
| <b>P77122</b>  | TY-2482_chromosome | - | 4561601 | 4561975 | 5229.670874 | 4266.913929 | 4805.858945 | 2881.557871 | 2608.639888 | 2883.546063 | 0.816919642  | 4.152337551  | 3.829543689 |
| <b>B7L797</b>  | TY-2482_chromosome | + | 4561951 | 4562553 | 5910.429857 | 4496.484571 | 5275.664101 | 2950.377955 | 2843.838276 | 3031.772942 | 0.888797072  | 4.502413733  | 4.162074003 |
| <b>B7L798</b>  | TY-2482_chromosome | + | 4562666 | 4564537 | 8225.671884 | 7718.542183 | 7991.121968 | 1416.561104 | 1513.184346 | 1281.576357 | 2.516498876  | 15.56666876  | 14.9656515  |
| <b>B5Z3Y5</b>  | TY-2482_chromosome | + | 4564661 | 4565362 | 4960.52819  | 4774.008001 | 5016.993047 | 5672.063335 | 6470.802717 | 6052.135392 | -0.287429229 | 0.509829798  | 0.425790179 |
| <b>B7L7A0</b>  | TY-2482_chromosome | + | 4565601 | 4566560 | 3304.387839 | 3081.739517 | 3546.951835 | 1587.210058 | 1522.318236 | 1442.483612 | 1.156567827  | 10.81864075  | 10.29471607 |
| <b>B7L7A1</b>  | TY-2482_chromosome | - | 4566563 | 4567519 | 668.3659385 | 679.4570325 | 743.9246762 | 485.7152916 | 506.0269356 | 520.389314  | 0.485660787  | 4.674461194  | 4.326628474 |
| <b>B7L7A2</b>  | TY-2482_chromosome | + | 4567671 | 4568972 | 1468.88471  | 1276.458264 | 1392.183463 | 2608.059312 | 3047.901425 | 3080.290192 | -1.04173535  | 19.22507492  | 18.58332407 |
| <b>B7L7A3</b>  | TY-2482_chromosome | - | 4569111 | 4570784 | 3834.655534 | 3984.693875 | 4387.399827 | 5774.950157 | 5349.71592  | 5558.154891 | -0.436991714 | 0.910924523  | 0.782842508 |
| <b>B7L7A4</b>  | TY-2482_chromosome | - | 4571025 | 4572242 | 352.3065226 | 274.8215053 | 360.2257316 | 586.6773237 | 621.9687234 | 615.1001065 | -0.811703766 | 10.80602211  | 10.28296934 |
| <b>B7L7A5</b>  | TY-2482_chromosome | + | 4572460 | 4574109 | 2822.287685 | 3220.318547 | 3245.357129 | 2285.374608 | 2144.33088  | 2243.916993 | 0.463356098  | 2.406469617  | 2.166076937 |
| <b>B7L7A6</b>  | TY-2482_chromosome | + | 4574152 | 4574628 | 598.7217269 | 629.6214478 | 716.4317452 | 849.6050824 | 909.4384857 | 1064.282557 | -0.510150418 | 5.413104753  | 5.033519446 |
| <b>sroB</b>    | TY-2482_chromosome | + | 4574750 | 4574833 | 109.459052  | 138.5329635 | 115.1349147 | 111.7553508 | 125.8103387 | 116.3556563 | -0.024142696 | 0.026428748  | 0.020824871 |
| <b>B7L7A7</b>  | TY-2482_chromosome | - | 4574835 | 4575626 | 1557.990173 | 1288.244268 | 1389.440092 | 1023.362042 | 981.0549686 | 1106.684332 | 0.483113472  | 4.7907286125 | 4.437278671 |
| <b>B6I0D3</b>  | TY-2482_chromosome | + | 4575710 | 4576102 | 837.5243587 | 988.9525206 | 847.9437368 | 394.6194546 | 392.7420481 | 464.2658191 | 1.051061008  | 20.2050805   | 19.5521289  |
| <b>B7L7A9</b>  | TY-2482_chromosome | - | 4576222 | 4578723 | 3003.406132 | 2731.084252 | 2950.981718 | 2534.025815 | 2480.777888 | 2328.262246 | 0.264223417  | 0.857550956  | 0.734579713 |
| <b>B7L7B0</b>  | TY-2482_chromosome | + | 4578985 | 4579914 | 772.5164571 | 796.3720221 | 894.6629944 | 74.49221962 | 69.92672413 | 53.373314   | 3.646065021  | 146.9510646  | 145.4983026 |
| <b>B7L7B1</b>  | TY-2482_chromosome | + | 4579920 | 4581209 | 758.209924  | 892.0826844 | 894.8346084 | 211.8292225 | 207.5264827 | 216.4599413 | 1.983910182  | 60.81764141  | 59.79970234 |
| <b>B7L7B2</b>  | TY-2482_chromosome | + | 4581337 | 4581741 | 1142.895504 | 1257.968966 | 1142.398817 | 905.8719042 | 835.4066356 | 926.9735707 | 0.380348604  | 4.041373656  | 3.720951498 |
| <b>P0AAS3</b>  | TY-2482_chromosome | - | 4581748 | 4582203 | 1232.188607 | 1277.159845 | 1254.301419 | 1452.020976 | 1370.867437 | 1526.463491 | -0.214128517 | 1.429031732  | 1.257225668 |
| <b>B7L7B4</b>  | TY-2482_chromosome | - | 4582203 | 4583117 | 1925.867936 | 1672.529606 | 2012.50405  | 2308.164249 | 2209.544364 | 2181.562647 | -0.208381038 | 1.580604925  | 1.39554907  |
| <b>B7L7B5</b>  | TY-2482_chromosome | + | 4583263 | 4583937 | 1105.449699 | 1170.738919 | 1119.302894 | 886.3372302 | 862.2055333 | 855.7169899 | 0.366152696  | 3.778347228  | 3.47083118  |
| <b>B7L7B6</b>  | TY-2482_chromosome | + | 4583927 | 4584703 | 1061.832091 | 1197.189782 | 1132.167522 | 895.483762  | 884.9398741 | 862.1183881 | 0.333637972  | 3.271124543  | 2.985478486 |
| <b>D3GVDD0</b> | TY-2482_chromosome | - | 4584772 | 4585659 | 2542.728307 | 1864.688342 | 2333.093267 | 2479.743594 | 2488.072266 | 2231.909454 | -0.026588943 | 0.248220146  | 0.203254582 |
| <b>B7L7B8</b>  | TY-2482_chromosome | + | 4585687 | 4586493 | 841.8152642 | 796.4669512 | 830.4223997 | 1766.329015 | 1803.044192 | 1816.701825 | -1.110724228 | 27.74222235  | 26.99577081 |
| <b>B7L7B9</b>  | TY-2482_chromosome | - | 4586486 | 4587109 | 1387.210372 | 1025.76041  | 1300.028772 | 1405.296847 | 1397.186816 | 1429.528953 | -0.11477328  | 0.966358628  | 0.832868435 |
| <b>B7L7C0</b>  | TY-2482_chromosome | + | 4587077 | 4587760 | 558.7439469 | 492.5167729 | 528.7408531 | 460.9340336 | 363.0395796 | 399.9064492 | 0.390842476  | 2.577405954  | 2.326599508 |
| <b>B7L7C1</b>  | TY-2482_chromosome | + | 4587760 | 4590171 | 716.7666128 | 726.9793218 | 689.8143546 | 764.7475926 | 782.5219958 | 664.6001469 | -0.06890106  | 0.20818025   | 0.169346455 |
| <b>B7L7C2</b>  | TY-2482_chromosome | + | 4590604 | 4594890 | 359.1626048 | 355.7815292 | 349.2346696 | 566.2546025 | 599.221524  | 614.3280382 | -0.74209774  | 9.242715157  | 8.756361664 |
| <b>B7L7C6</b>  | TY-2482_chromosome | + | 4595301 | 4596008 | 49.76736032 | 76.10526526 | 63.16266179 | 55.65299307 | 51.00384366 | 65.5562051  | 0.060850761  | 0.191375945  | 0.155197813 |
| <b>B7L7C7</b>  | TY-2482_chromosome | + | 4595992 | 4596480 | 23.89844479 | 24.62737382 | 14.9812708  | 17.06723443 | 21.73924296 | 19.79050557 | 0.041633078  | 0.098854801  | 0.071008121 |
| <b>B7L7C8</b>  | TY-2482_chromosome | - | 4596771 | 4596983 | 29.63396374 | 39.51599875 | 30.37492816 | 41.82964745 | 59.67021559 | 48.62680501 | -0.664558355 | 1.519817254  | 1.340976872 |
| <b>B7L7C9</b>  | TY-2482_chromosome | - | 4596973 | 4597404 | 149.8037247 | 177.5957678 | 142.6287932 | 189.7632174 | 198.1605318 | 192.3620765 | -0.364871679 | 1.299973168  | 1.139391786 |
| <b>B7L7D0</b>  | TY-2482_chromosome | - | 4597487 | 4598578 | 541.3126573 | 565.0066562 | 524.6103127 | 438.8220081 | 395.7114728 | 419.8490064 | 0.358259153  | 2.861890241  | 2.597385498 |
| <b>B7L7D1</b>  | TY-2482_chromosome | - | 4598650 | 4599573 | 81.09089345 | 74.23398724 | 77.6322473  | 50.35385204 | 67.09120655 | 55.97083466 | 0.440944709  | 1.313316813  | 1.151095392 |
| <b>B7L7D2</b>  | TY-2482_chromosome | + | 4599803 | 4600282 | 87.13605681 | 125.7480548 | 104.8941535 | 68.79859726 | 53.70375793 | 51.44948494 | 0.785101304  | 4.157517971  | 3.834358079 |
| <b>B7L7D3</b>  | TY-2482_chromosome | + | 4600363 | 4601175 | 2857.417335 | 2888.70118  | 2844.795872 | 1159.053763 | 1080.278161 | 1084.021182 | 1.363770036  | 35.58170574  | 34.74853514 |
| <b>B7L7D4</b>  | TY-2482_chromosome | + | 4601268 | 4603046 | 164.4880697 | 163.5648483 | 186.4248112 | 82.3924839  | 87.41120501 | 84.17372223 | 1.041243924  | 8.816927342  | 8.341109102 |
| <b>B7L7D5</b>  | TY-2482_chromosome | + | 4603062 | 4603835 | 54.01063588 | 67.40361243 | 54.81122504 | 14.67808927 | 21.75835385 | 22.00979625 | 1.534830932  | 8.128130134  | 7.66890465  |
| <b>B7L7D6</b>  | TY-2482_chromosome | + | 4603938 | 4604813 | 55.81582954 | 69.01840177 | 63.17985362 | 32.59581545 | 32.12990341 | 34.66641258 | 0.879658206  | 3.645417658  | 3.343167978 |
| <b>B7L7D8</b>  | TY-2482_chromosome | + | 4606499 | 4607857 | 122.2827491 | 124.1914386 | 140.4563322 | 84.82031614 | 83.68243009 | 91.39831065 | 0.595361896  | 2.894698033  | 2.628430144 |
| <b>B7L7D9</b>  | TY-2482_chromosome | + | 4607917 | 4609215 | 108.3443309 | 91.73268013 | 93.61772479 | 48.39638778 | 47.97859663 | 69.33575394 | 0.855964789  | 4.168595087  | 3.844443662 |
| <b>B7L7E0</b>  | TY-2482_chromosome | + | 4609240 | 4610382 | 335.5687922 | 441.4044584 | 350.8923686 | 95.00827367 | 73.18325925 | 79.40506914 | 2.102884075  | 39.01131103  | 38.15062489 |
| <b>B7L7E1</b>  | TY-2482_chromosome | - | 4610517 | 4611299 | 277.2023854 | 198.1143038 | 264.1009595 | 298.3516147 | 299.938454  | 306.2034628 | -0.208222939 | 1.180650971  | 1.029165746 |
| <b>B7L7E2</b>  | TY-2482_chromosome | - | 4611313 | 4612545 | 175.8427863 | 179.1081149 | 193.7264542 | 221.3401105 | 199.7769133 | 211.2833029 | -0.194361464 | 0.725006894  | 0.61657026  |
| <b>B7L7E4</b>  | TY-2482_chromosome | - | 4612570 | 4613616 | 25.34273946 | 11.94207345 | 21.51510998 | 30.15035704 | 24.9883984  | 22.51049224 | -0.279480205 | 0.587269695  | 0.494300165 |
| <b>B7L7E5</b>  | TY-2482_chromosome | + | 4613933 | 4615597 | 42.25198239 | 25.69461909 | 20.93153429 | 28.53959299 | 25.32400375 | 26.6250717  | 0.165048373  | 0.149589334  | 0.120166406 |
| <b>B7L7E6</b>  | TY-2482_chromosome | + | 4615610 | 4616866 | 54.53048486 | 77.58186834 | 67.44462225 | 52.18595744 | 57.49423361 | 47.88998402 | 0.273809761  | 0.798301056  | 0.682317163 |
| <b>B7L7E7</b>  | TY-2482_chromosome | + | 4616880 | 4617692 | 32.1969521  | 22.06432516 | 31.4571519  | 29.25622869 | 30.08660778 | 42.93253183 | -0.165321424 | 0.34842178   | 0.288536611 |
| <b>B7L7E8</b>  | TY-2482_chromosome | + | 4617692 | 4618582 | 72.56052595 | 66.37641721 | 56.53312298 | 61.08204783 | 66.83538714 | 40.11938267 | 0.187924971  | 0.415483964  | 0.345291648 |
| <b>P77130</b>  | TY-2482_chromosome | - | 4618492 | 4618776 | 109.1986726 | 81.12651839 | 73.95003054 | 122.4032361 | 151.0575362 | 122.4799224 | -0.566753946 | 2.42381497   | 2.182513407 |
| <b>B7L7E9</b>  | TY-2482_chromosome | + | 4618783 | 4619847 | 859.5004172 | 759.6078042 | 836.1095877 | 1152.531806 | 1351.159781 | 1284.07111  | -0.591596007 | 8.070150995  | 7.613173805 |
| <b>B7L7F0</b>  | TY-2482_chromosome | - | 4619847 | 4620353 | 486.8611427 | 379.030241  | 443.922408  | 786.4388045 | 978.7598876 | 901.0114884 | -0.967817323 | 15.58559707  | 14.9842325  |
| <b>B7L7F1</b>  | TY-2482_chromosome | - | 4620474 | 4621193 | 1820.08373  | 1679.863282 | 1712.693358 | 2407.819744 | 2533.649752 | 2557.069551 | -0.510051886 | 5.653324406  | 5.265105567 |
| <b>P77131</b>  | TY-2482_chromosome | + | 4621184 | 4621867 | 10799.06679 | 11454.18056 | 11268.26729 | 9547.857985 | 9588.888325 | 9575.92347  | 0.213536176  | 0.305066205  | 0.151820693 |



|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L7F3</b> | TY-2482_chromosome | + | 4621864 | 4623246 | 1672.117185 | 1492.256424 | 1586.180456 | 4289.334433 | 4695.456613 | 4176.703833 | -1.447696384 | 14.04183576 | 13.46741283 |
| <b>B7L7F4</b> | TY-2482_chromosome | - | 4623288 | 4623806 | 110.3251896 | 85.17386344 | 117.3867843 | 362.5879805 | 387.6282127 | 350.0296751 | -1.738927719 | 27.83722307 | 27.08931335 |
| <b>Q1RF06</b> | TY-2482_chromosome | + | 4623892 | 4624146 | 1297.921398 | 1092.833738 | 1130.932451 | 990.8504763 | 1083.70897  | 1222.535348 | 0.127905936  | 0.437257138 | 0.364603643 |
| <b>B7L7F6</b> | TY-2482_chromosome | - | 4624131 | 4624994 | 3305.76562  | 3129.340845 | 3183.867284 | 2984.760066 | 2874.103975 | 2988.847094 | 0.130286906  | 0.29201074  | 0.241119133 |
| <b>B7L7F7</b> | TY-2482_chromosome | + | 4625475 | 4626014 | 43.10561892 | 34.76254069 | 30.65539822 | 28.70457936 | 22.51726104 | 26.76001608 | 0.473809423  | 0.926537882 | 0.797403031 |
| <b>B7L8D6</b> | TY-2482_chromosome | + | 4626237 | 4626926 | 21.45959842 | 23.00560991 | 25.65664993 | 41.53206307 | 45.37204652 | 73.62056914 | -1.168365735 | 4.016913735 | 3.698307192 |
| <b>B7L8D7</b> | TY-2482_chromosome | + | 4626960 | 4629566 | 55.37610882 | 63.19995319 | 52.01129938 | 67.2503075  | 76.47205125 | 79.4886689  | -0.432084372 | 1.094240495 | 0.950212727 |
| <b>argU</b>   | TY-2482_chromosome | + | 4631993 | 4632069 | 21.29106536 | 28.27566055 | 19.02562916 | 83.5926771  | 107.7250424 | 135.766565  | -2.327113647 | 14.54140131 | 13.95840433 |
| <b>B7L8E2</b> | TY-2482_chromosome | - | 4632118 | 4632876 | 84.06651751 | 125.8961149 | 109.0563377 | 275.2767545 | 332.1153185 | 488.742146  | -1.830489881 | 17.30101828 | 16.67865547 |
| <b>P77089</b> | TY-2482_chromosome | + | 4632933 | 4633142 | 36.20414477 | 52.70905194 | 34.89570447 | 48.11374477 | 68.40276936 | 58.92022642 | -0.609460703 | 1.2717346   | 1.113389085 |
| <b>B7L8E3</b> | TY-2482_chromosome | - | 4633062 | 4633949 | 109.3330362 | 137.7095709 | 108.1040737 | 148.4656794 | 204.7203143 | 189.4489396 | -0.67689549  | 3.1269284   | 2.848774671 |
| <b>B7L8E4</b> | TY-2482_chromosome | - | 4633953 | 4636922 | 490.3317346 | 440.6867227 | 429.8768905 | 646.6368286 | 667.2091561 | 664.7974398 | -0.5317278   | 5.453027321 | 5.071561496 |
| <b>B7L8E5</b> | TY-2482_chromosome | - | 4636912 | 4639146 | 222.6441619 | 240.6043301 | 200.1550582 | 630.1460597 | 693.9659449 | 642.0621185 | -1.610591037 | 31.47797017 | 30.6908532  |
| <b>B7L8E6</b> | TY-2482_chromosome | - | 4639418 | 4640551 | 45.47794185 | 37.75798807 | 48.5931146  | 99.1044989  | 168.1887488 | 207.6074651 | -1.772438557 | 11.92634515 | 11.38703584 |
| <b>B7L8E7</b> | TY-2482_chromosome | - | 4640658 | 4640966 | 42.8971183  | 60.31452726 | 47.55226718 | 79.9619906  | 127.0641656 | 109.2644593 | -1.139225995 | 5.158054088 | 4.789990296 |
| <b>B7L8E8</b> | TY-2482_chromosome | - | 4641084 | 4641332 | 205.7860473 | 281.3675082 | 239.9802466 | 163.4210141 | 196.926034  | 214.2764938 | 0.280373584  | 1.307146657 | 1.145935223 |
| <b>B7L8E9</b> | TY-2482_chromosome | - | 4641332 | 4646191 | 1433.94226  | 1613.130638 | 1468.495388 | 716.1014798 | 876.9509356 | 880.6396777 | 0.842009888  | 14.99113317 | 14.39972914 |
| <b>B7L8F1</b> | TY-2482_chromosome | - | 4646703 | 4648601 | 23.88460307 | 15.41621485 | 20.18067957 | 29.61123431 | 25.42893383 | 23.52869464 | -0.340719581 | 0.595946952 | 0.502546146 |
| <b>B7L8F2</b> | TY-2482_chromosome | - | 4649341 | 4650798 | 138.3050411 | 122.2069078 | 157.5352303 | 274.6322029 | 281.4007068 | 249.5236668 | -0.893996688 | 8.168185249 | 7.70820774  |
| <b>B7L8F3</b> | TY-2482_chromosome | - | 4650779 | 4651459 | 339.2697416 | 307.4207904 | 304.8129851 | 282.5257843 | 334.7322513 | 335.9239138 | 0.011500872  | 0           | 0           |
| <b>B7L8F4</b> | TY-2482_chromosome | + | 4651616 | 4652995 | 21.32029764 | 16.07358513 | 26.82842833 | 16.232321   | 20.31362701 | 28.17526776 | 0.092203631  | 4.34E-16    | 0           |
| <b>B7L8F6</b> | TY-2482_chromosome | + | 4653370 | 4654590 | 28.43368155 | 37.56459376 | 39.84353234 | 35.94876176 | 39.9793633  | 51.05904253 | -0.270076815 | 0.41839869  | 0.347797145 |
| <b>B7L8F7</b> | TY-2482_chromosome | + | 4654605 | 4657745 | 250.0710586 | 225.3434656 | 242.7886498 | 260.6342578 | 267.5553133 | 288.0489419 | -0.157383377 | 0.688644446 | 0.58420953  |
| <b>B7L8F8</b> | TY-2482_chromosome | + | 4657850 | 4659223 | 1044.742422 | 978.7323383 | 947.0614736 | 1726.208193 | 2081.768856 | 1977.462351 | -0.956653032 | 17.98085585 | 17.35113817 |
| <b>B7L8F9</b> | TY-2482_chromosome | - | 4659297 | 4660541 | 1992.805655 | 1908.679887 | 2144.742633 | 1696.350922 | 1680.976246 | 1616.175202 | 0.301057201  | 1.98270065  | 1.769152877 |
| <b>B7L8G0</b> | TY-2482_chromosome | - | 4660652 | 4661302 | 3622.821159 | 3495.777306 | 3581.783428 | 2790.255855 | 2793.905648 | 2825.315244 | 0.342201895  | 1.166598824 | 1.016344943 |
| <b>B7N9I3</b> | TY-2482_chromosome | - | 4661399 | 4661884 | 431.1503864 | 555.9247883 | 390.0857726 | 470.4168789 | 492.4931965 | 532.5855008 | -0.216425542 | 0.502796207 | 0.420050854 |
| <b>B7L8G2</b> | TY-2482_chromosome | - | 4661832 | 4662077 | 385.55572   | 435.3114739 | 390.9704509 | 287.0242632 | 317.6125982 | 345.8040205 | 0.32147513   | 2.071492526 | 1.852505266 |
| <b>B7L8G3</b> | TY-2482_chromosome | - | 4662146 | 4663261 | 1759.978117 | 1565.220848 | 1734.027197 | 421.2001298 | 437.7417339 | 427.6326791 | 2.007206349  | 81.82403168 | 80.66733635 |
| <b>A1A8L3</b> | TY-2482_chromosome | - | 4663468 | 4663734 | 61.93577467 | 52.81645243 | 29.90499292 | 137.7171161 | 137.6811836 | 130.978736  | -1.550767519 | 10.06208298 | 9.553859824 |
| <b>P11901</b> | TY-2482_chromosome | + | 4663932 | 4665041 | 518.2586353 | 520.4486696 | 460.1695825 | 0           | 0.425187825 | 10.49051199 | 0.479815938  | 176.5316452 | 174.9637044 |
| <b>D2NE71</b> | TY-2482_chromosome | + | 4665410 | 4665704 | 38.72065792 | 37.93864124 | 31.9633149  | 199.1977579 | 222.3764749 | 201.4265834 | -2.545377704 | 30.64202064 | 29.86439107 |
| <b>P11901</b> | TY-2482_chromosome | - | 4665903 | 4667012 | 492.8243936 | 526.9309211 | 524.3455428 | 0.171446653 | 0           | 2.99583125  | 9.138135475  | 189.9004643 | 188.2849751 |
| <b>D3GWC2</b> | TY-2482_chromosome | - | 4667181 | 4667921 | 74.67009121 | 48.6124982  | 42.50389945 | 51.79696869 | 47.34170222 | 57.0280733  | 0.115945555  | 0.143874167 | 0.116123748 |
| <b>B7L8G6</b> | TY-2482_chromosome | - | 4667976 | 4670213 | 212.3526748 | 273.944043  | 269.7839555 | 132.0077649 | 131.2350007 | 133.9919196 | 0.897834014  | 8.171297574 | 7.710920537 |
| <b>B7L8G7</b> | TY-2482_chromosome | + | 4670534 | 4671655 | 269.8967246 | 300.8552522 | 247.5650295 | 32.15840648 | 25.9190041  | 41.00153621 | 3.001549386  | 59.18714131 | 58.18171366 |
| <b>B7L8G9</b> | TY-2482_chromosome | + | 4671876 | 4675754 | 1260.506317 | 1043.441988 | 1102.161586 | 221.2020779 | 229.9234945 | 193.6635256 | 2.426927498  | 90.30634649 | 89.10638246 |
| <b>B7L8H1</b> | TY-2482_chromosome | - | 4677106 | 4677918 | 433.7005464 | 381.9715136 | 426.6076368 | 44.8400961  | 50.26739016 | 34.06296919 | 3.288036611  | 88.42122924 | 87.22810464 |
| <b>B7L8H2</b> | TY-2482_chromosome | - | 4677918 | 4678907 | 493.6131297 | 471.2560764 | 412.8623665 | 73.39127656 | 70.17549789 | 61.13771381 | 7.24361955   | 74.80565744 | 73.68944623 |
| <b>B7L8H3</b> | TY-2482_chromosome | - | 4678907 | 4679908 | 563.8857053 | 519.8768696 | 568.8247014 | 124.1598187 | 117.2136302 | 124.3684448 | 2.200338293  | 61.85233725 | 60.82616053 |
| <b>B7L8H4</b> | TY-2482_chromosome | + | 4680019 | 4681266 | 165.3757357 | 146.8360246 | 149.5906935 | 31.55114692 | 33.94048588 | 47.09504742 | 2.060731     | 24.55229119 | 23.84078835 |
| <b>B7L8H5</b> | TY-2482_chromosome | - | 4681276 | 4682229 | 376.5909583 | 301.2428033 | 366.1715444 | 99.10812644 | 116.0801883 | 115.305361  | 1.719758073  | 27.18669827 | 26.44603098 |
| <b>B7L8H6</b> | TY-2482_chromosome | + | 4682604 | 4683776 | 109.2005829 | 136.8559345 | 101.0764184 | 26.9857083  | 18.08954798 | 23.53002149 | 2.249367608  | 22.83729493 | 22.14782454 |
| <b>B7L8H7</b> | TY-2482_chromosome | + | 4683789 | 4685396 | 297.2027618 | 264.7890882 | 291.5865109 | 65.37434269 | 76.79012163 | 69.87503707 | 2.037814325  | 36.29693042 | 35.45719304 |
| <b>B7L8H8</b> | TY-2482_chromosome | + | 4685413 | 4686267 | 256.0892654 | 176.8860873 | 249.6251501 | 37.9090522  | 56.63718449 | 39.9992198  | 2.433366419  | 32.43154638 | 31.63144828 |
| <b>B7L8H9</b> | TY-2482_chromosome | + | 4686270 | 4687013 | 279.1799701 | 266.4019714 | 243.1896672 | 76.37656376 | 91.87545114 | 87.08732705 | 1.617528377  | 23.68251053 | 22.98205904 |
| <b>B7L8I0</b> | TY-2482_chromosome | + | 4687019 | 4687429 | 138.3371606 | 135.4249131 | 149.2083683 | 44.13513407 | 36.29159148 | 44.44476834 | 1.776993033  | 19.33045588 | 18.68717716 |
| <b>B7L8I1</b> | TY-2482_chromosome | + | 4687613 | 4689715 | 281.56489   | 2486.200169 | 2536.016565 | 2951.878041 | 3024.151605 | 2498.188438 | -0.101111134 | 0.295370133 | 0.243793288 |
| <b>B7L8I2</b> | TY-2482_chromosome | + | 4689900 | 4690094 | 386.8120058 | 363.8687915 | 396.4007541 | 237.6958356 | 236.0773423 | 247.3531179 | 0.692754879  | 6.835731503 | 6.416210527 |
| <b>B7L8I3</b> | TY-2482_chromosome | - | 4690110 | 4691195 | 524.9308796 | 532.2571902 | 495.9110769 | 369.53497   | 337.2455388 | 387.9866683 | 0.491515954  | 4.510575184 | 4.169663638 |
| <b>B7L8I4</b> | TY-2482_chromosome | + | 4691304 | 4692461 | 254.3497206 | 232.3074125 | 190.3847033 | 167.7903458 | 189.3929575 | 193.6346998 | 0.277489951  | 1.174826769 | 1.0238345   |
| <b>B7L8I5</b> | TY-2482_chromosome | - | 4692468 | 4693094 | 122.706465  | 177.8156783 | 126.8733953 | 104.2533878 | 109.0744967 | 112.481875  | 0.284101964  | 1.252611621 | 1.096041068 |
| <b>B7L8I6</b> | TY-2482_chromosome | - | 4693070 | 4694287 | 66.45275874 | 62.21753975 | 61.91066243 | 60.71088748 | 77.35470408 | 70.46115762 | -0.123284198 | 0.239689288 | 0.196168644 |
| <b>B7L8I7</b> | TY-2482_chromosome | - | 4694437 | 4695336 | 23.81346404 | 4.636773663 | 22.71214521 | 32.86965561 | 37.70378336 | 42.87974025 | -0.855882014 | 3.299161424 | 3.012001265 |
| <b>B7L8I8</b> | TY-2482_chromosome | - | 4695548 | 4696291 | 1176.850195 | 1135.837974 | 1241.128249 | 442.8068519 | 554.461356  | 525.4714696 | 1.247727931  | 28.83038222 | 28.0741157  |

|        |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7L8I9 | TY-2482_chromosome | + | 4696663 | 4697223 | 30337.07858 | 30149.94598 | 30952.87114 | 26618.78607 | 24815.25248 | 23063.30577 | 0.296517001  | 0.388113836 | 0.32097851  |
| B7L8J0 | TY-2482_chromosome | + | 4697355 | 4698917 | 5981.26451  | 5856.557859 | 6002.646605 | 6771.640203 | 7139.362747 | 6996.419631 | -0.220917565 | 0.340946545 | 0.282357629 |
| B7L8J1 | TY-2482_chromosome | - | 4699044 | 4699469 | 3260.904179 | 3455.848904 | 3656.214494 | 6578.598342 | 6475.57352  | 7003.608127 | -0.944232431 | 2.882823691 | 2.61703737  |
| B7L8J2 | TY-2482_chromosome | + | 4699690 | 4700925 | 165.9084926 | 149.3728826 | 184.906936  | 211.8702081 | 214.4865433 | 205.6050564 | -0.291024391 | 1.417560188 | 1.246915512 |
| C3TJV7 | TY-2482_chromosome | + | 4701009 | 4701467 | 722.1219979 | 855.4713215 | 728.7087346 | 1464.627776 | 1406.018806 | 1375.400381 | -0.934430637 | 16.00709764 | 15.40084153 |
| D3GX75 | TY-2482_chromosome | - | 4701802 | 4702623 | 1839.63216  | 1675.262727 | 1782.971022 | 1544.353457 | 1443.535321 | 1538.219052 | 0.24932786   | 1.497187897 | 1.319527842 |
| B7L8J5 | TY-2482_chromosome | - | 4702722 | 4704182 | 94.41704387 | 180.2251871 | 136.4507278 | 131.7248053 | 167.2222336 | 182.1384022 | -0.345281974 | 0.600476661 | 0.506452883 |
| B7L8J6 | TY-2482_chromosome | - | 4704236 | 4705111 | 22.57076589 | 15.63638814 | 22.82618835 | 24.94138912 | 38.1142702  | 33.244675   | -0.575496906 | 1.344125216 | 1.179454232 |
| B7L8J7 | TY-2482_chromosome | - | 4705089 | 4705637 | 7.007838294 | 10.48028748 | 11.25603338 | 17.03006567 | 26.16650458 | 24.15500489 | -1.247844353 | 2.331514221 | 2.096385781 |
| Q1REU7 | TY-2482_chromosome | + | 4705605 | 4706996 | 21.08877476 | 24.59739875 | 17.5884737  | 27.37371944 | 24.15468026 | 32.81857293 | -0.477894602 | 0.609130506 | 0.514108592 |
| Q1REU5 | TY-2482_chromosome | + | 4707175 | 4708218 | 24.3116167  | 49.13293043 | 46.81525785 | 39.51567745 | 29.71104506 | 30.47004103 | 0.193320213  | 0.388001149 | 0.320967353 |
| B7L8K1 | TY-2482_chromosome | - | 4708403 | 4709458 | 90.77574093 | 84.49991565 | 83.49562032 | 68.87054841 | 72.74486553 | 85.8074003  | 0.196482965  | 0.453412374 | 0.37829724  |
| B7L8K2 | TY-2482_chromosome | + | 4709838 | 4711493 | 449.1360817 | 538.99194   | 465.7131791 | 597.1499312 | 585.0364969 | 647.1790228 | -0.378599547 | 2.383928742 | 2.145046653 |
| B7L8K3 | TY-2482_chromosome | + | 4711465 | 4712142 | 749.6499978 | 788.9427128 | 814.4662631 | 1335.418434 | 1173.050163 | 1323.787483 | -0.702867826 | 10.50024601 | 9.98467134  |
| B7L8K4 | TY-2482_chromosome | - | 4712189 | 4713571 | 5859.989766 | 6482.500317 | 6755.22055  | 6143.468689 | 4522.602421 | 5755.535493 | 0.213994557  | 0.320609183 | 0.264754461 |
| B7L9L5 | TY-2482_chromosome | + | 4714160 | 4714717 | 244.2854921 | 275.6186299 | 265.7484183 | 157.9074387 | 128.4613451 | 191.7489873 | 0.703904535  | 4.953641928 | 4.593225781 |
| Q8D127 | TY-2482_chromosome | + | 4714865 | 4715101 | 45066.52473 | 56806.72251 | 46222.84921 | 45572.93478 | 43232.06751 | 46489.62456 | 0.061386451  | 0.139824757 | 0.113000734 |
| B7L9G9 | TY-2482_chromosome | - | 4715161 | 4715541 | 374.5613144 | 461.577997  | 415.2563592 | 297.9997493 | 346.6750374 | 375.8147778 | 0.256568387  | 1.464026013 | 1.289497904 |
| C8UJU2 | TY-2482_chromosome | + | 4715634 | 4716419 | 289.9230287 | 321.7652157 | 337.3404705 | 233.2135109 | 266.2624781 | 266.3160326 | 0.310731459  | 1.615372607 | 1.427374874 |
| B7L9H1 | TY-2482_chromosome | + | 4716551 | 4716751 | 1753.212475 | 1525.771875 | 1596.336866 | 987.8975351 | 1229.533999 | 1404.725436 | 0.464056025  | 3.552954609 | 3.253314357 |
| B7L9H2 | TY-2482_chromosome | - | 4716858 | 4717820 | 5646.361872 | 5187.054801 | 5822.849613 | 10223.35798 | 10437.40187 | 10314.36768 | -0.863773062 | 2.293295547 | 2.060552527 |
| B7L9H3 | TY-2482_chromosome | - | 4718032 | 4718982 | 236.084604  | 177.2495459 | 180.0539374 | 219.154175  | 236.848105  | 275.592667  | -0.635446211 | 1.140901346 | 0.997572768 |
| C6V152 | TY-2482_chromosome | - | 4719244 | 4719882 | 599.7305648 | 528.0303657 | 648.9664417 | 982.2944565 | 1063.31828  | 1109.367502 | -0.773404163 | 12.49640776 | 11.9485826  |
| B7L9H5 | TY-2482_chromosome | - | 4719986 | 4720246 | 556.7407592 | 444.7001601 | 497.1820062 | 473.6926048 | 529.1164819 | 483.6699193 | 0.055618811  | 0.06443055  | 0.051001335 |
| B7L9H6 | TY-2482_chromosome | - | 4720360 | 4721568 | 2272.439915 | 2246.501682 | 2449.378681 | 3881.684321 | 4038.133712 | 3730.186481 | -0.725303159 | 4.192859889 | 3.867497315 |
| B7L9H7 | TY-2482_chromosome | - | 4721710 | 4722795 | 3942.551112 | 3612.081764 | 3426.965154 | 2427.849285 | 2272.735499 | 2368.197063 | -0.63552514  | 3.220197106 | 2.93756351  |
| B7L9H8 | TY-2482_chromosome | - | 4722809 | 4723918 | 2242.486135 | 2083.854966 | 1950.025125 | 1069.620587 | 1211.696295 | 1186.529995 | 0.855107249  | 14.10007731 | 13.52467366 |
| B7L9H9 | TY-2482_chromosome | - | 4723924 | 4725822 | 1316.518036 | 1380.638314 | 1223.014424 | 2854.369388 | 3187.459185 | 2797.380813 | -1.203314277 | 23.48652321 | 22.78954957 |
| B7L9I0 | TY-2482_chromosome | - | 4725856 | 4726320 | 1823.189462 | 1646.697969 | 1656.743611 | 2898.79913  | 3130.701942 | 3306.369149 | -0.847644837 | 6.611129088 | 6.197285245 |
| B7L9I1 | TY-2482_chromosome | - | 4726327 | 4726641 | 1237.121083 | 1208.389713 | 1360.249006 | 2268.973922 | 2285.377941 | 2495.630635 | -0.860830454 | 14.59560287 | 14.01160559 |
| P77I08 | TY-2482_chromosome | + | 4726655 | 4726942 | 304.6730474 | 229.1022495 | 265.8714908 | 456.0237236 | 634.3405167 | 717.071537  | -1.107081375 | 12.67855277 | 12.12733586 |
| B7L9I2 | TY-2482_chromosome | - | 4726904 | 4727512 | 605.5676176 | 535.0247152 | 507.5775733 | 542.274775  | 539.5815322 | 533.9451446 | 0.032700034  | 0.098392898 | 0.077998903 |
| B7L9I3 | TY-2482_chromosome | - | 4727539 | 4728177 | 1132.432466 | 1024.438806 | 1030.32675  | 1033.625476 | 1023.921661 | 960.0277701 | 0.08858561   | 0.367766384 | 0.303868302 |
| B7L9I4 | TY-2482_chromosome | - | 4728182 | 4729210 | 4660.282949 | 2337.23206  | 2524.338257 | 2362.139149 | 2380.821098 | 2395.831304 | 0.104474495  | 0.191475372 | 0.155202675 |
| B7L9I5 | TY-2482_chromosome | - | 4729213 | 4729791 | 2630.351344 | 3880.786673 | 4034.448405 | 2482.538552 | 2421.996507 | 2301.603994 | 0.786212626  | 4.472482709 | 4.133474297 |
| B7L9I6 | TY-2482_chromosome | - | 4729809 | 4732388 | 12573.52643 | 12078.73598 | 12256.80162 | 14217.18262 | 13715.761   | 13078.23662 | -0.147566657 | 0.185336981 | 0.149966965 |
| B7L9I7 | TY-2482_chromosome | + | 4732623 | 4733102 | 1981.636509 | 2121.068241 | 2091.846849 | 1381.765126 | 1250.493609 | 1301.871708 | 0.642758193  | 9.039520145 | 8.557675399 |
| B7L9I8 | TY-2482_chromosome | + | 4733178 | 4734152 | 341.6790847 | 414.7476181 | 322.3337946 | 275.4796865 | 275.8379428 | 250.9585214 | 0.351216458  | 2.478814608 | 2.234622302 |
| B7L9J0 | TY-2482_chromosome | + | 4735020 | 4736444 | 60.45913253 | 76.96153703 | 57.84245186 | 70.05358533 | 67.17421662 | 77.72810467 | -0.213000283 | 0.307287647 | 0.25345166  |
| B7L9J1 | TY-2482_chromosome | - | 4736460 | 4737011 | 10.49089313 | 23.90192287 | 13.15408292 | 13.7764512  | 24.40619815 | 19.31855232 | -0.43953634  | 0.296792904 | 0.245020077 |
| B7L9J2 | TY-2482_chromosome | + | 4737112 | 4737816 | 18.98427264 | 27.85403044 | 35.16218464 | 18.14615513 | 26.27179458 | 28.67600027 | 0.182675022  | 0.193316827 | 0.156665659 |
| B7L9J3 | TY-2482_chromosome | + | 4737816 | 4739264 | 209.8056028 | 220.8747021 | 208.4507939 | 141.4931301 | 127.5923851 | 136.7483602 | 0.636921303  | 4.603373926 | 4.25901558  |
| C8TKH1 | TY-2482_chromosome | - | 4739330 | 4740997 | 166.3044338 | 191.8501867 | 182.4250834 | 345.2486212 | 386.0481897 | 417.158087  | -1.106423745 | 13.00923689 | 12.45147036 |
| B7L9J7 | TY-2482_chromosome | - | 4741084 | 4742016 | 2261.031724 | 2273.187408 | 2370.486266 | 3283.112939 | 2783.214214 | 2843.930517 | -0.364931448 | 1.572859604 | 1.388601208 |
| B7L9J8 | TY-2482_chromosome | - | 4742137 | 4742859 | 743.3508162 | 805.6554377 | 855.9805967 | 498.2021791 | 509.3524379 | 431.6451745 | 0.738412688  | 10.2785678  | 9.767023968 |
| B7L9J9 | TY-2482_chromosome | - | 4742862 | 4743533 | 390.1577433 | 384.5699432 | 399.3488672 | 314.2114108 | 383.8365078 | 332.6188611 | 0.19680604   | 0.859926455 | 0.736493074 |
| B7L9K0 | TY-2482_chromosome | - | 4743536 | 4744273 | 331.502718  | 303.5807034 | 340.3259844 | 358.7166235 | 468.8958238 | 385.4713066 | -0.284049797 | 1.626219113 | 1.437281494 |
| B7L9K1 | TY-2482_chromosome | - | 4744446 | 4745351 | 741.9613248 | 948.4271905 | 806.1872527 | 1089.663489 | 1751.282499 | 1464.102107 | -0.84095404  | 7.962096153 | 7.507355679 |
| C8U318 | TY-2482_chromosome | + | 4745806 | 4747679 | 319.6122492 | 256.0915797 | 298.7797665 | 438.8550024 | 451.1944269 | 431.2048792 | -0.546367343 | 5.101497359 | 4.735054826 |
| C5W100 | TY-2482_chromosome | + | 4747651 | 4747857 | 238.4875041 | 259.3958651 | 174.8347281 | 271.5985681 | 305.7067242 | 302.1516212 | -0.46534436  | 1.995650368 | 1.780820439 |
| B7L9K4 | TY-2482_chromosome | - | 4747763 | 4749298 | 1702.581745 | 1592.701918 | 1305.328211 | 2297.899393 | 2689.482287 | 2373.942703 | -0.705942431 | 7.543564245 | 7.099596001 |
| B7L9K5 | TY-2482_chromosome | - | 4749326 | 4750201 | 3599.71535  | 3307.106505 | 3257.302788 | 3100.115219 | 3097.203105 | 2946.65422  | 0.157680187  | 0.389905009 | 0.32246495  |
| B7L9K6 | TY-2482_chromosome | - | 4750294 | 4750758 | 2153.33114  | 2007.474693 | 2048.866865 | 1142.688892 | 1188.90723  | 1133.299026 | 0.85280684   | 14.72425459 | 14.13824978 |
| B7L9K7 | TY-2482_chromosome | - | 4750758 | 4751834 | 5153.952997 | 4819.969535 | 5370.273338 | 2750.415474 | 2762.664599 | 2772.405419 | 0.917075315  | 5.521530597 | 5.137965714 |
| B7L9K8 | TY-2482_chromosome | - | 4751951 | 4753372 | 2055.601939 | 1922.599838 | 1796.288762 | 2610.388458 | 3026.416508 | 2660.726483 | -0.527992829 | 2.736079405 | 2.477453258 |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7L9K9</b> | TY-2482_chromosome | + | 4753518 | 4754690 | 1686.135819 | 2076.673229 | 1761.683784 | 1102.815101 | 1025.736946 | 1023.221894 | 0.749245426  | 12.95863826 | 12.40244015 |
| <b>A1A8T1</b> | TY-2482_chromosome | + | 4754844 | 4755122 | 1523.691563 | 1398.636601 | 1144.446297 | 4608.473852 | 5770.461765 | 5872.686963 | -2.016824841 | 20.76441187 | 20.10316517 |
| <b>glnV</b>   | TY-2482_chromosome | - | 4754847 | 4754921 | 666.7907802 | 607.9074397 | 432.1911106 | 1679.584298 | 2352.98093  | 2385.948369 | -1.947933283 | 37.44157692 | 36.59149146 |
| <b>glnV</b>   | TY-2482_chromosome | - | 4754959 | 4755033 | 1058.80054  | 944.3311057 | 805.2952888 | 3066.873599 | 4003.584654 | 4056.077848 | -1.992331285 | 25.8052453  | 25.08148242 |
| <b>metT</b>   | TY-2482_chromosome | - | 4755082 | 4755158 | 756.7185734 | 714.9470049 | 591.2146033 | 2768.499662 | 3161.906252 | 3295.840542 | -2.183044349 | 63.33824258 | 62.29318052 |
| <b>glnU</b>   | TY-2482_chromosome | - | 4755174 | 4755248 | 2475.623141 | 1877.600544 | 1879.765116 | 8061.646235 | 1067.91459  | 12018.96355 | -2.251373012 | 11.3955512  | 10.8628177  |
| <b>A1A8T2</b> | TY-2482_chromosome | + | 4755282 | 4755528 | 8157.848742 | 6646.462819 | 5849.72573  | 29537.84886 | 41917.34897 | 46343.29653 | -2.494953592 | 10.06145684 | 9.553513959 |
| <b>glnU</b>   | TY-2482_chromosome | - | 4755283 | 4755357 | 4824.048701 | 3539.352988 | 3552.172964 | 16365.85018 | 23026.28308 | 27368.49152 | -2.432501134 | 10.45876634 | 9.94461512  |
| <b>leuW</b>   | TY-2482_chromosome | - | 4755381 | 4755465 | 5945.693211 | 4978.027522 | 4020.972658 | 21850.92691 | 31938.73772 | 34450.62317 | -2.562710186 | 10.61513219 | 10.09612208 |
| <b>metT</b>   | TY-2482_chromosome | - | 4755474 | 4755550 | 2734.433027 | 2563.192682 | 1893.250005 | 10790.99129 | 15742.69044 | 14472.47512 | -2.548981868 | 12.09379416 | 11.55176577 |
| <b>D8ENZ6</b> | TY-2482_chromosome | + | 4755594 | 4755785 | 76.06767046 | 103.8232211 | 115.656409  | 44.17869165 | 44.39182941 | 45.61823929 | 1.12841126   | 6.695023744 | 6.278237055 |
| <b>B7L9L0</b> | TY-2482_chromosome | - | 4755934 | 4757595 | 1382.40766  | 1679.537826 | 1619.032949 | 928.3742193 | 834.4567934 | 777.494011  | 0.846455517  | 15.26736032 | 14.66945629 |
| <b>D8C3Y4</b> | TY-2482_chromosome | - | 4757552 | 4757830 | 106.0279103 | 111.7152409 | 119.0272154 | 88.89973226 | 81.64187902 | 80.31695736 | 0.42599656   | 1.639552172 | 1.4495379   |
| <b>B7L9L1</b> | TY-2482_chromosome | - | 4757855 | 4758604 | 1765.670005 | 1667.146009 | 1592.176548 | 2879.997456 | 3007.047221 | 2915.519276 | -0.813765486 | 7.532402705 | 7.089159291 |
| <b>B7L9L2</b> | TY-2482_chromosome | - | 4758655 | 4759872 | 3558.077709 | 3562.422961 | 3779.863807 | 5098.459359 | 4871.021181 | 5037.971005 | -0.450219981 | 1.08252139  | 0.939824886 |
| <b>B7L9L3</b> | TY-2482_chromosome | - | 4759884 | 4761029 | 2930.296187 | 2664.611593 | 2912.150141 | 4778.85515  | 4537.405243 | 4718.47492  | -0.695344157 | 3.791722431 | 3.483499351 |
| <b>B7L9L4</b> | TY-2482_chromosome | - | 4761092 | 4761889 | 2101.57201  | 1942.86746  | 2218.024948 | 3454.975285 | 3491.448999 | 3644.554811 | -0.722690541 | 5.247887015 | 4.875333297 |
| <b>B7L9L6</b> | TY-2482_chromosome | + | 4762222 | 4764165 | 7226.741494 | 7644.718986 | 8127.303364 | 11113.10035 | 10326.27519 | 10825.90222 | -0.483134989 | 0.87750444  | 0.752681686 |
| <b>B7L9L7</b> | TY-2482_chromosome | + | 4764371 | 4766032 | 8129.47919  | 7307.72829  | 7349.079666 | 5537.271699 | 5241.30788  | 4922.451512 | 0.546599569  | 1.089281707 | 0.945738507 |
| <b>B7L9L8</b> | TY-2482_chromosome | + | 4766481 | 4767884 | 227.7586752 | 252.2523667 | 222.9364704 | 476.4415647 | 383.5563667 | 353.2298458 | -0.832166951 | 7.124816698 | 6.697453761 |
| <b>B7L9L9</b> | TY-2482_chromosome | + | 4767937 | 4768260 | 102.440056  | 100.92268   | 103.4342989 | 141.044576  | 168.7085834 | 190.4674387 | -0.691202374 | 3.912611895 | 3.598690732 |
| <b>B7L9M0</b> | TY-2482_chromosome | - | 4768350 | 4768793 | 3863.817899 | 4022.763322 | 4248.184985 | 5940.553799 | 6045.699397 | 6125.904772 | -0.570611199 | 1.309745403 | 1.488155499 |
| <b>B7L9M1</b> | TY-2482_chromosome | + | 4768838 | 4769089 | 1595.111496 | 1793.112399 | 1830.158694 | 2879.167928 | 2858.548157 | 3102.356405 | -0.766558844 | 5.271022242 | 4.897235898 |
| <b>D3GXJ6</b> | TY-2482_chromosome | - | 4769085 | 4769729 | 3540.234636 | 3633.591218 | 3726.780979 | 4728.087309 | 5051.33775  | 5109.936085 | -0.445462157 | 1.060902992 | 0.919894944 |
| <b>B5YQM9</b> | TY-2482_chromosome | - | 4769755 | 4770114 | 337.9474307 | 386.4260804 | 270.971739  | 1105.607382 | 1257.089216 | 1415.975625 | -1.999449778 | 46.98843369 | 46.07191449 |
| <b>B7L9M4</b> | TY-2482_chromosome | - | 4770188 | 4770949 | 890.3582966 | 792.4759634 | 853.4110555 | 816.7741311 | 783.1001094 | 844.9906189 | 0.080718232  | 0.237567285 | 0.194431143 |
| <b>D3GXJ9</b> | TY-2482_chromosome | + | 4770999 | 4771676 | 2990.097686 | 2554.478322 | 2775.796989 | 3990.070244 | 3793.949662 | 3789.25323  | -0.444952328 | 1.878333036 | 1.672399712 |
| <b>B7L9M6</b> | TY-2482_chromosome | + | 4771705 | 4773342 | 8976.235468 | 7555.132532 | 8483.838299 | 10242.17118 | 9707.195197 | 9214.647383 | -0.184696293 | 0.305601238 | 0.251962165 |
| <b>B7L9M7</b> | TY-2482_chromosome | - | 4773404 | 4774720 | 312.0180686 | 296.5101448 | 313.1558438 | 278.0693899 | 279.9026994 | 329.8314412 | 0.075182298  | 0.176156919 | 0.142336271 |
| <b>B7L9M8</b> | TY-2482_chromosome | - | 4774720 | 4776915 | 120.2752827 | 121.8077032 | 116.5090366 | 108.9853554 | 109.1569348 | 103.3481684 | 0.144866146  | 0.404875915 | 0.336418534 |
| <b>C8UJZ6</b> | TY-2482_chromosome | - | 4777608 | 4778282 | 504.7672555 | 491.0111221 | 375.861484  | 589.8625287 | 627.8638693 | 617.849729  | -0.4638649   | 3.124438345 | 2.846449654 |
| <b>B7LAF0</b> | TY-2482_chromosome | - | 4778282 | 4780963 | 698.7067614 | 672.8317867 | 656.7645973 | 587.8419303 | 595.5890579 | 548.8860992 | 0.224528245  | 1.431581921 | 1.259646622 |
| <b>B7LAA3</b> | TY-2482_chromosome | - | 4780959 | 4781528 | 84.08395894 | 66.23251057 | 78.97456752 | 81.85512539 | 85.95150561 | 90.93440228 | -0.121808468 | 0.357874118 | 0.296488448 |
| <b>B7LAA4</b> | TY-2482_chromosome | - | 4781540 | 4783585 | 92.18721205 | 84.02321532 | 77.92985224 | 63.83529189 | 57.28631753 | 55.86767701 | 0.512884277  | 1.93718361  | 1.72745975  |
| <b>B7LAA5</b> | TY-2482_chromosome | - | 4783611 | 4785281 | 55.96899057 | 77.13870085 | 63.30565571 | 22.92619787 | 26.82376241 | 30.3909345  | 1.226147025  | 6.315526577 | 5.920817659 |
| <b>B7LAA6</b> | TY-2482_chromosome | + | 4785683 | 4785886 | 2327.690282 | 2508.411064 | 2294.670231 | 2252.069429 | 2586.556496 | 2777.595855 | -0.114311175 | 0.24454783  | 0.199963713 |
| <b>B7LAA7</b> | TY-2482_chromosome | + | 4786132 | 4790322 | 620.7958191 | 621.5688141 | 586.4081306 | 667.1161029 | 749.7681425 | 709.4105129 | -0.227318732 | 1.34408383  | 1.179454232 |
| <b>B7LAA9</b> | TY-2482_chromosome | + | 4790769 | 4792199 | 95.34507369 | 76.53093941 | 84.86987378 | 131.5479924 | 144.3738816 | 151.7882601 | -0.694364112 | 3.95952248  | 3.643084704 |
| <b>C8UJN2</b> | TY-2482_chromosome | + | 4793374 | 4794288 | 16.78267588 | 18.40668652 | 23.98964999 | 14.29709938 | 29.54038286 | 32.78931162 | -0.324608639 | 0.522923153 | 0.436796415 |
| <b>B7LAB3</b> | TY-2482_chromosome | + | 4794283 | 4794789 | 1037.074973 | 1007.748792 | 1088.862759 | 274.0857832 | 264.0219588 | 237.4929164 | 2.026907553  | 72.22214769 | 71.12266362 |
| <b>B7LAB4</b> | TY-2482_chromosome | + | 4794789 | 4796204 | 1844.853681 | 1850.445771 | 1869.182408 | 571.7702701 | 616.0595792 | 523.8282885 | 1.69865458   | 62.97736017 | 61.93709699 |
| <b>B7LAB5</b> | TY-2482_chromosome | + | 4796252 | 4797730 | 355.9272121 | 326.0883008 | 371.8749282 | 414.3997955 | 449.7761625 | 404.8292452 | -0.236415414 | 1.406276423 | 1.236532907 |
| <b>B7LAB6</b> | TY-2482_chromosome | + | 4798001 | 4798741 | 2298.835678 | 2483.698103 | 2677.699944 | 1832.016684 | 1690.992701 | 1872.596582 | 0.475110481  | 4.472248314 | 4.133429758 |
| <b>B7LAB8</b> | TY-2482_chromosome | + | 4799417 | 4800346 | 2352.528562 | 2773.702545 | 2577.508535 | 2758.363341 | 2579.56885  | 2566.424373 | -0.07312759  | 0.08619104  | 0.068433272 |
| <b>B7LAB9</b> | TY-2482_chromosome | + | 4800339 | 4801070 | 1718.505252 | 1893.120932 | 1899.216818 | 2168.992866 | 1981.465742 | 2070.286719 | -0.186319112 | 0.951046004 | 0.819680083 |
| <b>B7LAC0</b> | TY-2482_chromosome | + | 4801109 | 4801897 | 1161.878428 | 1032.050266 | 1154.994726 | 1652.053836 | 1603.621982 | 1610.790094 | -0.506324143 | 6.745599851 | 6.328131202 |
| <b>B7LAC1</b> | TY-2482_chromosome | - | 4801920 | 4802943 | 2904.12742  | 2826.633465 | 2530.530614 | 2152.980303 | 1530.800182 | 1465.367101 | 0.651904722  | 6.506091396 | 6.095170592 |
| <b>C8UK15</b> | TY-2482_chromosome | - | 4803098 | 4803778 | 64.55364891 | 41.45228664 | 28.44124828 | 73.80822311 | 87.4198328  | 75.22516678 | -0.811247415 | 2.827725844 | 2.565136405 |
| <b>E1U309</b> | TY-2482_chromosome | - | 4803783 | 4804477 | 414.6619715 | 447.5985794 | 411.085781  | 475.2506308 | 508.2076752 | 516.7117007 | -0.25921382  | 1.36647526  | 1.199551848 |
| <b>B7LAC4</b> | TY-2482_chromosome | - | 4804509 | 4804805 | 22.73876176 | 16.08404756 | 25.54067273 | 25.5334774  | 28.57816605 | 29.64921784 | -0.290524694 | 0.5649465   | 0.474234167 |
| <b>B7LAC5</b> | TY-2482_chromosome | - | 4804817 | 4805380 | 35.0648611  | 22.08749334 | 28.8357144  | 31.108571   | 29.56971827 | 31.84448364 | -0.032878555 | 0.094135392 | 0.047379194 |
| <b>B7LAC6</b> | TY-2482_chromosome | - | 4805773 | 4807053 | 24626.83608 | 21548.39856 | 24113.96369 | 20709.29751 | 19929.16481 | 13856.02271 | 0.389143486  | 0.510263507 | 0.426042037 |
| <b>D6HU93</b> | TY-2482_chromosome | + | 4807035 | 4807223 | 4687.274527 | 4028.300443 | 4865.850836 | 2529.026945 | 2394.216813 | 1875.869671 | 1.039093952  | 6.132533949 | 5.731582086 |
| <b>D6J831</b> | TY-2482_chromosome | - | 4807493 | 4807729 | 2555.267407 | 2704.100663 | 2599.120416 | 1708.571417 | 1838.355553 | 1588.282423 | 0.596476529  | 7.436465276 | 6.997784578 |
| <b>B5YQQ9</b> | TY-2482_chromosome | + | 4807747 | 4808148 | 4055.48544  | 4079.219658 | 4381.801219 | 2622.032446 | 2412.15409  | 2346.694019 | 0.771486104  | 4.150197466 | 3.827586504 |

|        |                    |   |         |         |             |              |             |             |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|--------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7LAC9 | TY-2482_chromosome | + | 4808145 | 4808489 | 3758.568259 | 4304.118939  | 4463.594519 | 2109.080566 | 1736.338769 | 1670.109636 | 1.168147304  | 9.065633448 | 8.582996435 |
| B7LAD0 | TY-2482_chromosome | + | 4808492 | 4810255 | 36619.10718 | 35551.59415  | 39488.24541 | 19805.37731 | 18461.08473 | 17284.14815 | 1.026041732  | 2.266548834 | 2.036178204 |
| B7LAD1 | TY-2482_chromosome | + | 4810274 | 4810987 | 20243.5083  | 19162.58579  | 19997.83266 | 12230.28877 | 11679.14259 | 10193.10101 | 0.808602557  | 1.678560067 | 1.48638445  |
| B7LAD2 | TY-2482_chromosome | + | 4811191 | 4813989 | 73385.47934 | 67616.70089  | 69424.33055 | 51483.49646 | 47567.30815 | 36188.0523  | 0.640071339  | 1.040333582 | 0.901007451 |
| B7LAD3 | TY-2482_chromosome | + | 4814007 | 4815221 | 60826.3532  | 53574.28757  | 57512.32813 | 46124.34023 | 44890.39378 | 33347.96003 | 0.483329976  | 0.671152172 | 0.567822332 |
| B7LAD4 | TY-2482_chromosome | + | 4815318 | 4816481 | 53930.56185 | 52411.7092   | 56917.29946 | 43283.24906 | 42754.67928 | 30900.49486 | 0.48874917   | 0.703575577 | 0.597699847 |
| B7LAD5 | TY-2482_chromosome | + | 4816484 | 4817350 | 41750.37314 | 42221.91891  | 44463.76063 | 31101.48203 | 32500.44469 | 23186.83072 | 0.563850705  | 0.899829301 | 0.772947254 |
| B7LAD6 | TY-2482_chromosome | - | 4817460 | 4818179 | 335.5260242 | 251.4457662  | 291.7380936 | 317.26297   | 348.1119415 | 332.8128652 | -0.127255119 | 0.63813531  | 0.538979298 |
| B7LAD7 | TY-2482_chromosome | + | 4818288 | 4820261 | 41.24664711 | 19.40211234  | 33.07098556 | 35.64912159 | 52.49392512 | 34.77086236 | -0.263682148 | 0.682528949 | 0.578638343 |
| B7LAD8 | TY-2482_chromosome | + | 4820282 | 4822912 | 317.1383405 | 356.6519929  | 302.0718049 | 326.1191753 | 358.6889462 | 396.0386084 | -0.186692235 | 0.613987439 | 0.518206931 |
| B7LAD9 | TY-2482_chromosome | + | 4822940 | 4823164 | 55.71243664 | 49.97743062  | 72.56239561 | 62.83047562 | 70.47819018 | 76.86933824 | -0.162751056 | 0.489838583 | 0.408878939 |
| B7LAE0 | TY-2482_chromosome | + | 4823762 | 4825327 | 33866.29285 | 26422.44635  | 29609.67174 | 65707.98044 | 61867.00475 | 64149.73876 | -1.045179128 | 2.455221947 | 2.212401339 |
| B7LAE1 | TY-2482_chromosome | + | 4825346 | 4826482 | 16210.082   | 12179.49949  | 14001.0208  | 36160.89026 | 33414.05154 | 34757.94277 | -1.244148754 | 3.460488306 | 3.16687643  |
| B7LAE2 | TY-2482_chromosome | + | 4826613 | 4826903 | 1952.717775 | 1571.609854  | 1645.326503 | 3741.851852 | 3542.132935 | 3673.326606 | -1.042733464 | 9.581274562 | 9.086848449 |
| B7LAE3 | TY-2482_chromosome | + | 4827056 | 4827457 | 687.661532  | 694.9209382  | 706.8321868 | 1376.456725 | 1717.543969 | 1680.712506 | -1.184612791 | 26.07425994 | 25.34772496 |
| B7LAE4 | TY-2482_chromosome | + | 4827457 | 4828146 | 1092.032381 | 981.74441175 | 1091.778522 | 2527.543194 | 2798.810499 | 2527.236922 | -1.28028227  | 29.80203258 | 29.03470703 |
| B7LAE5 | TY-2482_chromosome | + | 4828153 | 4828578 | 648.6263456 | 666.1271249  | 649.4760663 | 1361.912165 | 1408.480044 | 1268.406392 | -1.050719192 | 22.18678018 | 21.50678992 |
| B7LAE6 | TY-2482_chromosome | + | 4828646 | 4829908 | 2138.874779 | 2035.348703  | 2133.505794 | 2217.516901 | 2418.549772 | 2236.343773 | -0.109541067 | 0.576497904 | 0.484801437 |
| B7LAE7 | TY-2482_chromosome | + | 4830044 | 4831333 | 17026.324   | 14015.81714  | 15153.31329 | 7938.269385 | 8914.640273 | 8116.347    | 0.923750277  | 2.053572538 | 1.836453832 |
| Q1REI4 | TY-2482_chromosome | - | 4831308 | 4831922 | 30101.05762 | 26919.8208   | 29687.05094 | 11709.74978 | 11617.58143 | 12075.95004 | 1.324131171  | 3.539123271 | 3.240349356 |
| B7LAE9 | TY-2482_chromosome | + | 4831902 | 4832690 | 10842.48283 | 9599.231078  | 11154.49989 | 5044.388252 | 4748.572629 | 4669.418421 | 1.166171706  | 3.365413053 | 3.075887078 |
| lysV   | TY-2482_chromosome | + | 4832858 | 4832933 | 6848.972058 | 7299.979672  | 5694.502148 | 10803.19064 | 13305.46234 | 15225.88359 | -1.031193491 | 2.461259834 | 2.218134779 |
| valY   | TY-2482_chromosome | + | 4832969 | 4833044 | 5483.178841 | 5137.312862  | 4302.290488 | 8140.206512 | 9761.825078 | 11088.78899 | -0.972259789 | 2.505807591 | 2.25931945  |
| lysV   | TY-2482_chromosome | + | 4833048 | 4833123 | 3827.120021 | 3451.59462   | 3339.287831 | 6926.125383 | 9040.812252 | 9801.05461  | -1.262127923 | 4.336939009 | 4.005647408 |
| valY   | TY-2482_chromosome | + | 4833273 | 4833348 | 1069.815559 | 1116.893711  | 1156.410177 | 3553.822067 | 4623.799579 | 5366.965266 | -2.00302013  | 26.21386376 | 25.4850051  |
| lysV   | TY-2482_chromosome | + | 4833353 | 4833428 | 729.8749844 | 697.3593105  | 774.1590415 | 3080.496052 | 4358.273611 | 4489.07334  | -2.402084867 | 36.68137565 | 35.83922552 |
| lysV   | TY-2482_chromosome | + | 4833575 | 4833650 | 369.3354817 | 403.931577   | 392.2092092 | 1760.195426 | 2105.989885 | 2849.699313 | -2.525236801 | 68.17308987 | 67.10218115 |
| lysV   | TY-2482_chromosome | + | 4833684 | 4833759 | 134.6391383 | 165.8660073  | 91.7062098  | 604.8654162 | 749.8241307 | 1034.094058 | -2.718549789 | 38.49518661 | 37.63701812 |
| lysV   | TY-2482_chromosome | + | 4833793 | 4833868 | 73.62878724 | 68.33975163  | 41.32029986 | 260.7378031 | 359.9806607 | 458.8625153 | -2.605355916 | 28.22531043 | 27.47151852 |
| B7LAF1 | TY-2482_chromosome | + | 4834117 | 4835157 | 358.8371379 | 290.3018056  | 361.7587222 | 377.9423642 | 331.917387  | 345.1287148 | -0.003957414 | 1.034441299 | 1.08356973  |
| B7LAF2 | TY-2482_chromosome | + | 4835198 | 4835914 | 489.2852887 | 499.394125   | 481.424039  | 456.9465465 | 409.3234655 | 482.8961864 | 0.116933683  | 0.504567162 | 0.42150592  |
| B7LAF3 | TY-2482_chromosome | - | 4835917 | 4836855 | 783.2108363 | 714.2974608  | 770.0335331 | 513.2338547 | 468.1948355 | 528.7891528 | 0.611713421  | 7.115044004 | 6.688146299 |
| B7LAF4 | TY-2482_chromosome | - | 4836972 | 4837349 | 754.7693869 | 775.2941151  | 924.6249902 | 205.3154143 | 225.3424865 | 198.0597272 | 1.994004763  | 55.52858988 | 54.55622694 |
| D6J868 | TY-2482_chromosome | - | 4837438 | 4837662 | 436.9880067 | 496.7991065  | 334.3224573 | 211.6891483 | 185.2750913 | 214.3385755 | 0.962793444  | 11.04919528 | 10.5223546  |
| B7LAF5 | TY-2482_chromosome | + | 4837665 | 4838714 | 7592.469127 | 8094.485415  | 8566.945268 | 5115.26684  | 4746.284125 | 5096.997709 | 0.1701659352 | 1.608597644 | 1.420868077 |
| B7LAF6 | TY-2482_chromosome | - | 4838878 | 4839627 | 21032.16978 | 21522.13298  | 22322.34496 | 11168.14453 | 11459.49685 | 11746.328   | 0.922609132  | 2.077405454 | 1.857676458 |
| B7LAF7 | TY-2482_chromosome | - | 4839835 | 4840872 | 7401.627736 | 6913.275538  | 7232.500498 | 9441.800199 | 8753.759788 | 8420.034024 | -0.292371704 | 0.4714596   | 0.392800029 |
| B7LAF8 | TY-2482_chromosome | - | 4840869 | 4842014 | 4489.23454  | 4346.316302  | 4613.226116 | 7217.267114 | 7232.467994 | 6874.182599 | -0.651843    | 1.56499535  | 1.382064667 |
| B7LAF9 | TY-2482_chromosome | - | 4842021 | 4843064 | 2582.700986 | 2621.577187  | 2525.909017 | 3449.25313  | 2968.472694 | 2780.541263 | -0.266883866 | 0.864378555 | 0.740251043 |
| B7LAG0 | TY-2482_chromosome | - | 4843077 | 4844090 | 2961.078817 | 2779.031587  | 2750.083839 | 5334.66226  | 4631.026319 | 4255.550161 | -0.746387446 | 3.862269322 | 3.550672029 |
| B7LAG1 | TY-2482_chromosome | - | 4844354 | 4845823 | 6562.972521 | 6218.251689  | 6376.253244 | 10588.23878 | 9981.745671 | 10761.60302 | -0.697895608 | 1.569002919 | 1.385674348 |
| B7LAG3 | TY-2482_chromosome | - | 4845894 | 4846679 | 1420.926322 | 1607.151858  | 1438.3719   | 1187.260648 | 1169.918129 | 1104.604892 | 0.328642402  | 3.452552113 | 3.159453083 |
| B7LB71 | TY-2482_chromosome | + | 4847124 | 4847894 | 1308.380687 | 1241.416439  | 1336.035923 | 5692.397351 | 5501.575025 | 6066.773885 | -2.128987876 | 26.40213718 | 25.67141058 |
| B7LB72 | TY-2482_chromosome | + | 4847897 | 4848583 | 642.2220509 | 728.1212678  | 605.2888254 | 4079.886328 | 3853.520605 | 3845.401842 | -2.628527753 | 58.28995781 | 57.29152096 |
| B7LB73 | TY-2482_chromosome | + | 4848589 | 4849644 | 767.3378367 | 846.0331939  | 733.0744476 | 5783.428791 | 5145.939951 | 4750.530948 | -2.786236956 | 41.09068415 | 40.21653541 |
| B5YRG4 | TY-2482_chromosome | - | 4849651 | 4850568 | 1248.324512 | 1271.660921  | 1231.390509 | 1966.579282 | 1919.711997 | 1834.80105  | -0.619656865 | 7.858518845 | 7.407972101 |
| B7LB75 | TY-2482_chromosome | - | 4850621 | 4851613 | 4666.388363 | 4507.483044  | 4789.94385  | 4200.975531 | 4183.4964   | 4102.795889 | 0.175801242  | 0.241052899 | 0.197235416 |
| B5YRG6 | TY-2482_chromosome | - | 4851660 | 4852610 | 61.0625224  | 91.64321947  | 71.94119036 | 194.7903389 | 231.1267126 | 227.6505481 | -1.624638358 | 14.81009115 | 14.22240628 |
| B7LB80 | TY-2482_chromosome | + | 4853922 | 4855352 | 86.61082612 | 56.72097312  | 66.37758264 | 89.61196317 | 77.13446078 | 107.7221307 | -0.316873378 | 1.041539558 | 0.902093506 |
| B7LB81 | TY-2482_chromosome | + | 4855538 | 4857796 | 216.7422415 | 266.5022937  | 227.2000512 | 196.8774257 | 236.355536  | 216.7981557 | 0.075331975  | 0.337662211 | 0.279769679 |
| B7LB82 | TY-2482_chromosome | - | 4858036 | 4859316 | 1940.114782 | 1627.457057  | 1818.873633 | 1328.266506 | 1552.746861 | 1373.538414 | 0.380054012  | 2.635283615 | 2.382301808 |
| B7LB83 | TY-2482_chromosome | - | 4859454 | 4860521 | 477.2916252 | 389.1954085  | 448.1998876 | 311.3532493 | 398.8062854 | 322.3010171 | 0.394740568  | 2.140413744 | 1.91737439  |
| C6V292 | TY-2482_chromosome | + | 4861167 | 4861766 | 169.1469274 | 181.1290921  | 164.0000664 | 122.9226677 | 125.6430952 | 140.8507733 | 0.378732456  | 1.768366724 | 1.569916643 |
| B7LB86 | TY-2482_chromosome | - | 4862303 | 4862611 | 87.47548879 | 59.34493111  | 94.28034421 | 7.285101165 | 25.60134689 | 23.32183664 | 2.228649788  | 14.0189916  | 13.44522124 |
| B7LB88 | TY-2482_chromosome | - | 4862938 | 4863615 | 177.208074  | 168.9963347  | 183.7641572 | 32.38468662 | 35.28773843 | 36.03490349 | 2.371380497  | 35.76761686 | 34.93325966 |

|                |                    |   |         |         |             |             |             |             |             |             |              |              |             |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|
| <b>B7LB89</b>  | TY-2482_chromosome | - | 4863615 | 4864397 | 286.9506589 | 237.2601636 | 245.9276623 | 45.09066992 | 41.59152252 | 47.16595855 | 2.549945005  | 46.60817435  | 45.69308846 |
| <b>P03702</b>  | TY-2482_chromosome | - | 4864406 | 4864774 | 134.7063812 | 119.9615012 | 132.1272883 | 12.2426175  | 8.715006447 | 11.61712989 | 3.584240574  | 50.33211227  | 49.39426017 |
| <b>E2QKN0</b>  | TY-2482_chromosome | - | 4864778 | 4865194 | 174.3261888 | 153.7423852 | 111.6518978 | 17.13856295 | 15.57672277 | 12.37002454 | 3.231667357  | 40.48233121  | 39.61271653 |
| <b>B7LB92</b>  | TY-2482_chromosome | - | 4865582 | 4866331 | 1471.37322  | 1609.550032 | 1583.216688 | 1471.260529 | 1311.755257 | 1344.589383 | 0.160101352  | 1.042009397  | 0.902323404 |
| <b>B7LB93</b>  | TY-2482_chromosome | + | 4866374 | 4866601 | 236.9559925 | 218.1777036 | 215.7125648 | 94.62331267 | 97.13684937 | 87.07000924 | 1.268933779  | 14.668407    | 14.0830724  |
| <b>B7LB94</b>  | TY-2482_chromosome | + | 4866674 | 4867210 | 19.8866389  | 9.312376155 | 9.156853639 | 25.84952838 | 34.21737818 | 36.39441581 | -1.251218795 | 3.462898688  | 3.169115729 |
| <b>B7LB95</b>  | TY-2482_chromosome | + | 4867210 | 4868226 | 37.30216717 | 24.15881054 | 42.5886987  | 39.05060344 | 44.63360657 | 56.63538011 | -0.306377715 | 0.860292506  | 0.736743513 |
| <b>B7LB8U8</b> | TY-2482_chromosome | + | 4869216 | 4869512 | 63.30669551 | 61.60817635 | 60.45285971 | 55.64963322 | 81.45472413 | 86.41525212 | -0.260728325 | 0.62523057   | 0.527384319 |
| <b>B7LBA2</b>  | TY-2482_chromosome | + | 4870936 | 4871442 | 92.72033559 | 106.2758411 | 83.76591805 | 76.06521094 | 69.02268193 | 87.159216   | 0.229931888  | 0.702916092  | 0.597151363 |
| <b>B7LBA3</b>  | TY-2482_chromosome | + | 4871640 | 4872092 | 44.25362908 | 23.5074649  | 30.50029299 | 19.63587729 | 17.3765357  | 26.59998546 | 0.723086094  | 1.31935584   | 1.156375383 |
| <b>B7LBA8</b>  | TY-2482_chromosome | - | 4873704 | 4874783 | 179356.5718 | 178956.4941 | 189403.9841 | 196101.7597 | 201215.4732 | 204677.1339 | -0.123667584 | 0.143111058  | 0.115453367 |
| <b>D8CBF3</b>  | TY-2482_chromosome | + | 4874993 | 4875259 | 21.91879907 | 17.02193549 | 12.06832384 | 36.66995233 | 47.31975473 | 47.76393713 | -1.381120895 | 4.491517054  | 4.151748389 |
| <b>D3QKQ6</b>  | TY-2482_chromosome | + | 4875327 | 4875584 | 27.21664838 | 29.34670459 | 17.87708657 | 148.5026841 | 133.3757242 | 184.7470999 | -2.717040527 | 23.86061226  | 23.15797287 |
| <b>B7LBB0</b>  | TY-2482_chromosome | + | 4875587 | 4876081 | 22.72382819 | 22.64010284 | 21.64288661 | 173.1364226 | 202.3546512 | 217.3882324 | -3.14866935  | 36.91890756  | 36.07250258 |
| <b>D8ACV6</b>  | TY-2482_chromosome | + | 4876081 | 4876638 | 26.31511415 | 11.15911473 | 14.80417206 | 179.5631804 | 192.2111825 | 197.7015144 | -3.331077738 | 40.56806886  | 39.69716356 |
| <b>B7LBB2</b>  | TY-2482_chromosome | + | 4876723 | 4877241 | 17.24075511 | 15.38455289 | 9.183182736 | 18.47585926 | 37.75920635 | 30.5618746  | -1.096673751 | 2.183497088  | 1.957247209 |
| <b>B7LBB3</b>  | TY-2482_chromosome | - | 4877597 | 4878019 | 101.2284444 | 110.8067598 | 114.7402174 | 96.352815   | 158.6910266 | 156.8428479 | -0.324996329 | 0.990133373  | 0.854508468 |
| <b>D7Y1Y3</b>  | TY-2482_chromosome | + | 4878056 | 4878319 | 65.32702433 | 67.62594693 | 73.06913607 | 51.06831876 | 51.19798577 | 49.58015723 | 0.445632433  | 1.31730605   | 1.154578752 |
| <b>D7XQE2</b>  | TY-2482_chromosome | - | 4878313 | 4878567 | 60.73757618 | 35.59580598 | 48.95158373 | 46.97839787 | 55.27776108 | 52.52019343 | 0.002378902  | 0.098555952  | 0.078070766 |
| <b>B7LBB5</b>  | TY-2482_chromosome | + | 4878683 | 4879225 | 42.16438726 | 49.93953813 | 33.61847739 | 23.14746531 | 26.57121939 | 26.33290526 | 0.641023854  | 1.81138109   | 1.610036161 |
| <b>B7LBB6</b>  | TY-2482_chromosome | + | 4879203 | 4880861 | 61.05939716 | 47.74764863 | 49.14003853 | 53.41580685 | 61.97265984 | 73.53077087 | -0.222360212 | 0.544586146  | 0.456119338 |
| <b>B7LBB9</b>  | TY-2482_chromosome | + | 4881327 | 4882925 | 109.3929599 | 142.2096781 | 108.1462867 | 96.46181532 | 114.6636516 | 102.0382387 | 0.118684507  | 0.440692051  | 0.367226858 |
| <b>B7LBC1</b>  | TY-2482_chromosome | + | 4884232 | 4884567 | 56.3767329  | 46.92625527 | 47.64553448 | 32.52349484 | 25.96457932 | 19.33040776 | 0.958374068  | 3.426897008  | 3.134821855 |
| <b>B7LBC2</b>  | TY-2482_chromosome | + | 4884599 | 4885648 | 41.79601117 | 35.21202542 | 34.73201299 | 24.99114546 | 15.40946418 | 22.7820293  | 0.829828805  | 2.192372925  | 1.96583     |
| <b>B7LBC7</b>  | TY-2482_chromosome | + | 4887413 | 4888180 | 45.50292291 | 44.91159214 | 44.5988526  | 42.63604654 | 32.15660353 | 34.7422278  | 0.292248998  | 0.573753937  | 0.482505238 |
| <b>B7LBD0</b>  | TY-2482_chromosome | + | 4889030 | 4891588 | 66.11159602 | 87.16172879 | 94.26260682 | 86.44624582 | 86.70500225 | 73.05890269 | -0.010740662 | 0            | 0           |
| <b>B7LBD1</b>  | TY-2482_chromosome | + | 4891588 | 4891914 | 13.05437291 | 17.74424927 | 10.42228106 | 32.38579179 | 27.4375045  | 26.84976008 | -1.184460429 | 2.228034538  | 1.999434733 |
| <b>E8HW87</b>  | TY-2482_chromosome | + | 4891917 | 4893361 | 28.01163802 | 29.23239244 | 34.18576424 | 84.42612879 | 85.05997013 | 88.97876377 | -1.479223366 | 8.608877717  | 8.137353742 |
| <b>B7LBD4</b>  | TY-2482_chromosome | + | 4893262 | 4893930 | 16.95416406 | 22.11818883 | 25.44632941 | 23.58642302 | 22.97915578 | 15.77336986 | 0.033843034  | 0.027318688  | 0.021538519 |
| <b>B7MSE1</b>  | TY-2482_chromosome | + | 4893991 | 4895823 | 171.3056858 | 141.1117374 | 129.8636089 | 167.6829917 | 186.2527628 | 170.1463218 | -0.237747956 | 0.08930686   | 0.691695058 |
| <b>C8U2R4</b>  | TY-2482_chromosome | + | 4895778 | 4897694 | 89.48762202 | 81.5381358  | 97.40486716 | 212.6634601 | 230.8866998 | 279.9256269 | -1.382526226 | 14.168525525 | 13.59154052 |
| <b>C8TVW5</b>  | TY-2482_chromosome | + | 4897738 | 4898364 | 65.9095467  | 52.7594377  | 52.07472081 | 36.34353762 | 39.44452198 | 31.21798395 | 0.68577056   | 2.163163089  | 1.937937317 |
| <b>B7LBD7</b>  | TY-2482_chromosome | + | 4899437 | 4901695 | 144.2855027 | 138.3607011 | 123.9519918 | 163.5680569 | 170.1768809 | 188.2693439 | -0.371177491 | 1.505761171  | 1.327445776 |
| <b>B7LBD8</b>  | TY-2482_chromosome | + | 4901698 | 4902279 | 46.44702125 | 36.14311836 | 36.23873969 | 100.6891386 | 127.488526  | 108.4223164 | -0.177733334 | 10.0018016   | 9.494978039 |
| <b>B7LBD9</b>  | TY-2482_chromosome | - | 4902359 | 4903687 | 649.6753291 | 798.6130878 | 870.0433905 | 293.0122805 | 586.4640087 | 625.8244095 | -1.639653857 | 3.217485108  | 2.935018259 |
| <b>B7LC55</b>  | TY-2482_chromosome | - | 4904436 | 4904909 | 1501.883368 | 1511.233431 | 1502.864082 | 550.2892594 | 547.587039  | 533.8844586 | 1.465468812  | 48.284406    | 47.36064839 |
| <b>B7LC56</b>  | TY-2482_chromosome | - | 4904971 | 4906257 | 226.868921  | 168.8730839 | 212.491877  | 340.9703322 | 372.5895328 | 400.0477414 | -0.799041728 | 8.127757455  | 7.668782358 |
| <b>B7LC57</b>  | TY-2482_chromosome | + | 4906344 | 4907381 | 175.8702419 | 105.3610545 | 147.9505198 | 124.6115583 | 100.3809073 | 117.5120568 | 0.045979951  | 1.127647307  | 0.981066645 |
| <b>B7LC58</b>  | TY-2482_chromosome | + | 4907381 | 4908532 | 137.1496035 | 87.37337694 | 117.6163922 | 119.594167  | 118.2614376 | 118.2614376 | 0.409981493  | 0.033661321  | 0.026468237 |
| <b>B7LC59</b>  | TY-2482_chromosome | + | 4908522 | 4909274 | 72.65740995 | 66.76543683 | 59.31436875 | 72.82108799 | 73.23533249 | 63.01652662 | -0.090189915 | 0.130914196  | 0.105476073 |
| <b>B7LC60</b>  | TY-2482_chromosome | + | 4909270 | 4909944 | 80.79993545 | 73.03139359 | 67.86865162 | 61.98221636 | 62.74650958 | 68.88299207 | 0.194861309  | 0.430516021  | 0.359039185 |
| <b>B7LC61</b>  | TY-2482_chromosome | + | 4910526 | 4912544 | 3537.9493   | 3103.859036 | 3341.850704 | 3595.679031 | 3485.527363 | 3565.650907 | -0.064673947 | 0.202282205  | 0.164303789 |
| <b>B7LC62</b>  | TY-2482_chromosome | - | 4912742 | 4913647 | 923.4342375 | 929.1652878 | 991.1481287 | 2147.72661  | 2262.665024 | 2207.495444 | -1.206295411 | 27.81394608  | 27.06700902 |
| <b>B7LC63</b>  | TY-2482_chromosome | + | 4914044 | 4915030 | 6450.698374 | 6051.26908  | 6027.244939 | 6995.317891 | 5911.42334  | 5960.660426 | -0.024560456 | 0.030600959  | 0.024141314 |
| <b>B7LC64</b>  | TY-2482_chromosome | + | 4915055 | 4915564 | 899.3973931 | 1051.577389 | 966.9789197 | 3439.656397 | 3275.18126  | 3474.151972 | -1.838003432 | 52.90410304  | 51.94540081 |
| <b>B7LC65</b>  | TY-2482_chromosome | + | 4915570 | 4916052 | 693.2004087 | 804.0403829 | 831.5356763 | 1079.302775 | 2902.830413 | 2703.364409 | -1.912940664 | 55.95343126  | 54.97943255 |
| <b>B7LC66</b>  | TY-2482_chromosome | + | 4916048 | 4916290 | 346.0588829 | 314.5878282 | 347.5693636 | 349.010207  | 1274.054473 | 1276.373462 | -1.952311575 | 65.28833191  | 64.23053877 |
| <b>B7LC67</b>  | TY-2482_chromosome | + | 4916295 | 4916744 | 659.4438122 | 488.2126936 | 694.7708842 | 2186.184952 | 2148.579069 | 1907.257149 | -1.673429142 | 44.55016935  | 43.65054542 |
| <b>B7LC68</b>  | TY-2482_chromosome | + | 4916884 | 4917585 | 4816.096685 | 4878.466661 | 5070.099982 | 3406.597354 | 3574.69578  | 3607.657817 | 0.487379254  | 1.28478789   | 1.125965805 |
| <b>B7LC69</b>  | TY-2482_chromosome | + | 4917733 | 4918434 | 50.79837238 | 59.17305404 | 55.99413726 | 61.63165328 | 63.31267448 | 81.45989026 | -0.332320235 | 0.770486805  | 0.656659803 |
| <b>B7LC70</b>  | TY-2482_chromosome | + | 4918507 | 4919217 | 33.2115828  | 21.00496848 | 23.32417302 | 28.28761257 | 31.94216805 | 43.38500966 | -0.35286335  | 0.71041815   | 0.603875812 |
| <b>B7LC71</b>  | TY-2482_chromosome | - | 4919259 | 4920212 | 243.9314234 | 245.148348  | 251.3765404 | 99.73565192 | 92.2145477  | 87.0933722  | 1.406169405  | 18.70268807  | 18.06473352 |
| <b>B7LC72</b>  | TY-2482_chromosome | - | 4920215 | 4921453 | 655.3765676 | 673.4686654 | 726.7156614 | 166.4414391 | 160.9180013 | 136.0225354 | 2.153365045  | 63.49689893  | 62.44990237 |
| <b>B7LC73</b>  | TY-2482_chromosome | - | 4921453 | 4922211 | 555.9660605 | 484.6722709 | 632.9682184 | 151.8094209 | 144.5804049 | 117.9339997 | 2.068030492  | 45.71869837  | 44.80929891 |
| <b>B7LC74</b>  | TY-2482_chromosome | + | 4922344 | 4922751 | 896.012548  | 1018.69828  | 933.9881096 | 1580.468885 | 1288.757734 | 1414.190604 | -0.623547097 | 7.375211388  | 6.93772348  |

|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LC75</b> | TY-2482_chromosome | - | 4922719 | 4923822 | 719.728288  | 704.5851402 | 636.8669004 | 1544.584956 | 1444.58289  | 1399.244571 | -1.10988647  | 23.96534834 | 23.26139091 |
| <b>B7LC76</b> | TY-2482_chromosome | - | 4923836 | 4924966 | 955.5152361 | 954.2916872 | 868.1320527 | 1895.036991 | 1808.618304 | 1607.495258 | -0.958452311 | 17.74012543 | 17.11262732 |
| <b>B7LC77</b> | TY-2482_chromosome | - | 4924962 | 4926695 | 2789.209562 | 2680.631414 | 2978.079031 | 4456.888656 | 4400.084926 | 4146.347483 | -0.600406278 | 2.940092219 | 2.671569923 |
| <b>B7LC78</b> | TY-2482_chromosome | - | 4926691 | 4927686 | 2624.860336 | 2382.18959  | 2741.000261 | 3074.253561 | 2972.4228   | 2928.776582 | -0.17697454  | 0.694716099 | 0.589838365 |
| <b>D3GZ40</b> | TY-2482_chromosome | - | 4927689 | 4928369 | 1023.146603 | 885.3725697 | 836.6429812 | 757.8421386 | 727.7821071 | 626.7815769 | 0.378106101  | 3.122292261 | 2.844468544 |
| <b>B7LC80</b> | TY-2482_chromosome | + | 4928586 | 4929947 | 2304.999514 | 2209.511952 | 2604.319581 | 4080.629613 | 5157.152578 | 4983.471917 | -0.956687782 | 6.295923862 | 5.889683721 |
| <b>B7LC81</b> | TY-2482_chromosome | - | 4930185 | 4930664 | 335.1544006 | 350.2812395 | 363.3356119 | 529.5707749 | 477.2499316 | 473.4395689 | -0.498884794 | 4.206490022 | 3.880206357 |
| <b>B7LC82</b> | TY-2482_chromosome | + | 4930784 | 4932931 | 3832.32433  | 3650.867152 | 3594.872239 | 3671.678445 | 3558.709198 | 3373.811735 | 0.062781827  | 0.130522699 | 0.105176813 |
| <b>B7LC83</b> | TY-2482_chromosome | + | 4932962 | 4933921 | 2480.363065 | 2298.866389 | 2699.221773 | 2540.40923  | 2378.087647 | 2444.10153  | 0.059923829  | 0.051311229 | 0.040297999 |
| <b>B7LC84</b> | TY-2482_chromosome | + | 4934065 | 4935147 | 1640.654218 | 1816.435062 | 1936.346776 | 1381.072495 | 1421.882085 | 1288.679976 | 0.397380075  | 3.504618967 | 3.207400116 |
| <b>B7LC85</b> | TY-2482_chromosome | - | 4935382 | 4935639 | 712.2289215 | 812.0578903 | 702.8541975 | 320.6024483 | 409.2601602 | 395.2962757 | 0.946830485  | 15.00898098 | 14.41655708 |
| <b>C6V2G3</b> | TY-2482_chromosome | - | 4935885 | 4936259 | 336.5608617 | 339.3266462 | 343.3620864 | 110.0958764 | 118.7601131 | 150.6690109 | 1.436018115  | 20.70436318 | 20.04431124 |
| <b>B7LC87</b> | TY-2482_chromosome | - | 4936247 | 4936921 | 133.4340831 | 125.5872043 | 146.2398399 | 69.06372439 | 62.37938102 | 59.00221504 | 1.115396596  | 8.577665487 | 8.10700056  |
| <b>B7LC88</b> | TY-2482_chromosome | - | 4936966 | 4939245 | 305.2966528 | 284.8258488 | 284.6250539 | 150.7480335 | 140.0629957 | 163.8566618 | 0.953913486  | 10.14778137 | 9.637591167 |
| <b>B7LC89</b> | TY-2482_chromosome | - | 4939513 | 4939914 | 40.51083933 | 39.19641    | 37.50591897 | 33.55011129 | 40.30689904 | 45.21539355 | -0.022716741 | 0           | 0           |
| <b>B7LC90</b> | TY-2482_chromosome | + | 4940046 | 4940969 | 181.8568134 | 131.1290099 | 110.1589791 | 401.1702679 | 463.128487  | 456.4219809 | -1.626806533 | 22.01299324 | 21.33714703 |
| <b>B7LC91</b> | TY-2482_chromosome | - | 4940972 | 4943194 | 636.9969784 | 617.3119056 | 607.876166  | 410.4820365 | 506.5076149 | 496.1191187 | 0.403856314  | 3.150704646 | 2.8713939   |
| <b>B7LC92</b> | TY-2482_chromosome | - | 4943314 | 4944033 | 1502.779561 | 1286.873892 | 1322.011303 | 5500.037969 | 7533.84022  | 5650.093294 | -2.166640748 | 24.53076357 | 23.81970822 |
| <b>B7LC93</b> | TY-2482_chromosome | - | 4944033 | 4944689 | 1056.32409  | 1001.687387 | 1025.873426 | 5769.593356 | 8370.66917  | 6381.817272 | -2.72292335  | 36.20254982 | 35.36521186 |
| <b>B7LC94</b> | TY-2482_chromosome | - | 4944831 | 4945574 | 3362.971532 | 3378.444235 | 3469.639297 | 9987.114449 | 15223.6068  | 14568.49817 | -1.946804634 | 8.09333193  | 7.636105504 |
| <b>C1HG03</b> | TY-2482_chromosome | - | 4945504 | 4945692 | 915.173593  | 938.3344017 | 913.8421472 | 2268.668674 | 3559.828139 | 3339.254988 | -0.172556652 | 33.30812024 | 32.49464103 |
| <b>E2QIH9</b> | TY-2482_chromosome | - | 4945623 | 4945913 | 192.9987892 | 174.0607091 | 172.6313579 | 175.1990252 | 186.3159328 | 157.8245609 | 0.060442099  | 0.141108728 | 0.114131116 |
| <b>B7LC95</b> | TY-2482_chromosome | - | 4945981 | 4946481 | 17435.48554 | 18842.96886 | 19016.43124 | 6444.962387 | 6419.42512  | 5642.788754 | 1.567320868  | 5.315197537 | 4.939555672 |
| <b>B5YSA5</b> | TY-2482_chromosome | - | 4946783 | 4947679 | 151.1589985 | 154.6721772 | 145.2838223 | 353.8771006 | 448.8694256 | 404.6648551 | -1.431479786 | 19.99315354 | 19.34293214 |
| <b>B7LC97</b> | TY-2482_chromosome | - | 4948020 | 4948532 | 61571.2665  | 61176.74449 | 63045.1009  | 15507.94716 | 16730.96837 | 18585.32849 | 1.882935849  | 6.13834177  | 5.737170843 |
| <b>B7LC98</b> | TY-2482_chromosome | - | 4948587 | 4950167 | 493.9602194 | 478.395298  | 469.9573811 | 1282.039491 | 1615.853395 | 1437.236049 | -1.584964053 | 41.78654908 | 40.90913249 |
| <b>P75786</b> | TY-2482_chromosome | + | 4950241 | 4950507 | 1401.39064  | 1573.966291 | 1409.64595  | 1715.1353   | 1895.78621  | 2045.524862 | -0.396784922 | 3.013662708 | 2.741411147 |
| <b>rybA</b>   | TY-2482_chromosome | - | 4950522 | 4950610 | 574.2943739 | 745.184344  | 542.2814249 | 533.6514422 | 671.7260837 | 816.1973662 | -0.200492068 | 0.432110209 | 0.359970611 |
| <b>B7LC99</b> | TY-2482_chromosome | + | 4950753 | 4951217 | 441.9272205 | 667.8223554 | 567.4460019 | 496.9383171 | 544.6176912 | 493.7283258 | 0.045257467  | 0.384860224 | 0.31823231  |
| <b>B7LCA0</b> | TY-2482_chromosome | + | 4951217 | 4952332 | 572.7003521 | 740.1921487 | 552.2699452 | 365.1515009 | 380.4890758 | 335.1534991 | 0.693547935  | 8.344168022 | 7.878381311 |
| <b>B7LCA1</b> | TY-2482_chromosome | - | 4952397 | 4953314 | 1323.012181 | 1380.85151  | 1231.62044  | 2552.530977 | 3171.652018 | 2915.639576 | -1.158093693 | 20.83116741 | 20.16952172 |
| <b>B7LCA2</b> | TY-2482_chromosome | + | 4953533 | 4955122 | 3910.715878 | 3895.573051 | 4074.453353 | 5068.005623 | 5727.262069 | 5291.511805 | -0.427406176 | 0.880660251 | 0.755605502 |
| <b>B7LF78</b> | TY-2482_chromosome | + | 4955404 | 4956381 | 1175.375869 | 1243.298522 | 1209.759915 | 1474.141451 | 1416.035977 | 1420.16271  | -0.261421254 | 1.946430664 | 1.735718648 |
| <b>B7LCA4</b> | TY-2482_chromosome | - | 4956643 | 4957905 | 926.3748792 | 916.7086975 | 890.9212036 | 345.8219664 | 357.1705064 | 347.4972247 | 1.375272322  | 37.33655998 | 36.48770482 |
| <b>B7LCA5</b> | TY-2482_chromosome | - | 4958060 | 4958872 | 598.2908486 | 595.8164321 | 629.1487172 | 539.1372209 | 571.5518845 | 483.2644107 | 0.054880528  | 0.91423344  |             |
| <b>B7LCA6</b> | TY-2482_chromosome | - | 4959021 | 4961450 | 241.870335  | 223.768714  | 222.8671469 | 211.3696974 | 198.4051078 | 230.6245044 | 0.115035251  | 0.325112888 | 0.268312422 |
| <b>B7LCA7</b> | TY-2482_chromosome | - | 4961459 | 4962382 | 60.01021914 | 40.98369413 | 29.73476978 | 32.22175556 | 24.06065918 | 41.60039689 | 0.425889073  | 0.775648362 | 0.661591898 |
| <b>B7LCA8</b> | TY-2482_chromosome | + | 4962486 | 4963145 | 393.6400955 | 396.2880616 | 435.0456146 | 308.1317772 | 254.2575762 | 250.8822828 | 0.600927686  | 5.216588852 | 4.846081765 |
| <b>B7LCA9</b> | TY-2482_chromosome | - | 4963239 | 4963985 | 1940.901214 | 2021.769246 | 2017.143049 | 2684.275945 | 2465.850261 | 2410.704177 | -0.347073293 | 2.661732271 | 2.406877156 |
| <b>B7LCB0</b> | TY-2482_chromosome | - | 4963988 | 4965220 | 3639.15856  | 3606.072255 | 3624.9046   | 3653.149897 | 3198.625065 | 3392.474938 | 0.085511463  | 0.184653715 | 0.149420114 |
| <b>B7LCB1</b> | TY-2482_chromosome | + | 4965424 | 4966386 | 3020.406071 | 3419.271869 | 3245.58089  | 1197.143085 | 1136.432031 | 1202.141772 | 1.429516084  | 37.82208452 | 36.97014705 |
| <b>B7LCB2</b> | TY-2482_chromosome | + | 4966409 | 4968244 | 3920.139418 | 3882.417364 | 3599.317158 | 2539.975307 | 2423.922142 | 2432.071793 | 0.609834099  | 3.151401951 | 2.871925665 |
| <b>B7LCB3</b> | TY-2482_chromosome | + | 4968267 | 4969802 | 2896.607228 | 3065.334996 | 2968.334779 | 2128.082076 | 2164.535213 | 1986.184259 | 0.492771553  | 2.717321681 | 2.459798805 |
| <b>B7LCB4</b> | TY-2482_chromosome | + | 4969823 | 4970740 | 1076.358401 | 1165.275889 | 1143.602252 | 1013.866466 | 1031.036773 | 1001.661897 | 0.138723629  | 0.861029236 | 0.737159896 |
| <b>B7LCB5</b> | TY-2482_chromosome | + | 4970746 | 4971654 | 671.9794376 | 806.8866708 | 748.5227552 | 691.5055808 | 703.7982747 | 666.8634616 | 0.073755468  | 0.455857338 | 0.380314727 |
| <b>B7LCB6</b> | TY-2482_chromosome | + | 4971835 | 4974180 | 216.8214597 | 294.8472778 | 211.7517495 | 276.4862241 | 322.437927  | 281.9309919 | -0.38670492  | 1.314861123 | 1.15226035  |
| <b>B7LCB7</b> | TY-2482_chromosome | + | 4974191 | 4975516 | 282.1675906 | 279.512628  | 210.6124365 | 256.6457073 | 307.5996784 | 293.8440206 | -0.197855603 | 0.53810211  | 0.449955146 |
| <b>B7LCB8</b> | TY-2482_chromosome | - | 4975569 | 4976891 | 594.8727235 | 584.2294816 | 591.9559572 | 1792.809179 | 2402.16937  | 2279.673712 | -1.859170963 | 53.71168279 | 52.74820805 |
| <b>B7LCB9</b> | TY-2482_chromosome | + | 4977104 | 4977484 | 4569.059942 | 4804.325882 | 4665.11489  | 3377.3181   | 3483.789982 | 3874.614961 | 0.38040331   | 1.228083202 | 1.073255806 |
| <b>B7LCC0</b> | TY-2482_chromosome | + | 4977598 | 4978710 | 567.5544422 | 573.8776176 | 624.7081597 | 434.1152459 | 420.2115139 | 443.4584938 | 0.460114848  | 4.060747024 | 3.739414205 |
| <b>B7LCC1</b> | TY-2482_chromosome | - | 4978713 | 4979336 | 894.6881345 | 1094.863805 | 989.9520577 | 760.1688124 | 728.5454358 | 649.0044822 | 0.429850336  | 4.63178704  | 4.778887958 |
| <b>B7LCC2</b> | TY-2482_chromosome | + | 4979583 | 4980782 | 3301.188715 | 3311.710318 | 3383.456147 | 1865.249383 | 1800.908289 | 1743.214276 | 0.887328505  | 7.211188794 | 6.779851128 |
| <b>B7LCC3</b> | TY-2482_chromosome | - | 4980835 | 4981590 | 1176.410185 | 1106.41434  | 1069.181841 | 1758.207326 | 1760.782961 | 1651.544512 | -0.626955826 | 8.821523867 | 8.345445336 |
| <b>B7LCC4</b> | TY-2482_chromosome | - | 4981651 | 4982244 | 745.7462411 | 732.2869221 | 661.2898876 | 1283.897539 | 1565.490583 | 1593.368828 | -1.064683338 | 20.15702863 | 19.50602892 |
| <b>B7LCC5</b> | TY-2482_chromosome | + | 4982529 | 4983758 | 384.5561198 | 266.6665694 | 388.837225  | 602.4245391 | 760.5796315 | 703.0908909 | -0.886532943 | 11.13916685 | 10.61027277 |

|         |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| B7LD36  | TY-2482_chromosome | - | 4983805 | 4984086 | 170.5949653 | 158.2694435 | 172.314365  | 177.6269698 | 219.2156938 | 200.2571155 | -0.227843396 | 0.904482184 | 0.77695912  |
| B7LD37  | TY-2482_chromosome | - | 4984175 | 4984987 | 315.3703176 | 302.3337861 | 327.4270463 | 275.2345694 | 261.856473  | 294.0507165 | 0.206690523  | 0.813139158 | 0.695105089 |
| B7LD38  | TY-2482_chromosome | - | 4984990 | 4986195 | 215.4386529 | 189.9301221 | 172.9072031 | 190.8504805 | 181.9221119 | 185.4692396 | 0.04743489   | 0.124828891 | 0.100220191 |
| B7LD39  | TY-2482_chromosome | + | 4986279 | 4986812 | 113.389159  | 178.2029588 | 139.4582844 | 137.7400875 | 116.6415235 | 150.7001445 | -0.006053011 | 0.13278399  | 0.107161336 |
| rybB    | TY-2482_chromosome | - | 4986832 | 4986910 | 88.18296689 | 130.0465412 | 72.75548184 | 71.18646777 | 72.03343844 | 95.38436968 | 0.141536463  | 0.573265013 | 0.48212364  |
| B7LD40  | TY-2482_chromosome | - | 4986993 | 4988675 | 1834.945099 | 1778.902736 | 1804.574414 | 3242.749526 | 3268.253854 | 3348.90217  | -0.856391808 | 6.829750177 | 6.410412717 |
| B7LD41  | TY-2482_chromosome | + | 4988945 | 4989319 | 879.235586  | 872.1125063 | 842.0894732 | 548.8463308 | 403.86406   | 483.4175967 | 0.843523202  | 12.53252356 | 11.98315998 |
| B7LD42  | TY-2482_chromosome | - | 4989355 | 4989609 | 197.3324929 | 285.7930181 | 180.4013464 | 141.7237909 | 150.2568278 | 185.0666282 | 0.347972709  | 1.832051859 | 1.629321619 |
| B7LD43  | TY-2482_chromosome | + | 4989769 | 4990053 | 807.887854  | 795.8549365 | 833.2106405 | 617.978352  | 665.4820757 | 704.2779014 | 0.308369195  | 2.304949427 | 2.07161128  |
| B7LD44  | TY-2482_chromosome | + | 4990040 | 4990759 | 2409.237005 | 2506.943579 | 2761.019568 | 2040.959436 | 1928.026075 | 1842.55856  | 0.412724641  | 3.490211732 | 3.193682238 |
| B7LD45  | TY-2482_chromosome | + | 4990823 | 4991722 | 1876.24124  | 1941.463424 | 2265.146926 | 2095.952001 | 2199.377578 | 2071.525861 | -0.039992238 | 0.241493493 | 0.197491744 |
| B7LD46  | TY-2482_chromosome | + | 4991813 | 4992286 | 1064.888701 | 1121.597587 | 1117.735077 | 1562.958272 | 1499.79876  | 1613.822732 | -0.506335    | 6.30733115  | 5.900425424 |
| B7LD47  | TY-2482_chromosome | + | 4992641 | 4993750 | 264.8217444 | 242.1666802 | 267.1129005 | 282.3927198 | 350.4217334 | 342.3447059 | -0.301080674 | 1.687267038 | 1.493788426 |
| B7LD48  | TY-2482_chromosome | + | 4993848 | 4994978 | 164.5049074 | 141.1221686 | 206.0173626 | 182.6631373 | 128.6543076 | 113.1284255 | 0.652806379  | 2.967472925 | 2.694751163 |
| C8UL80  | TY-2482_chromosome | + | 4994991 | 4995941 | 136.0687583 | 119.1240696 | 120.8854165 | 48.77074278 | 49.26212852 | 56.088011   | 1.304807291  | 10.76081593 | 10.23805317 |
| B7LD50  | TY-2482_chromosome | + | 4995941 | 4996783 | 163.1539417 | 196.2416687 | 181.0162374 | 110.8626969 | 140.6980651 | 132.7475274 | 0.459648939  | 2.352876867 | 2.116250858 |
| B7LD51  | TY-2482_chromosome | + | 4996846 | 4997331 | 218.5893054 | 185.4360344 | 174.3175093 | 227.1037012 | 201.5919101 | 241.6827102 | -0.202763671 | 0.732062801 | 0.622940446 |
| B7LD52  | TY-2482_chromosome | + | 4997375 | 4998499 | 233.9362824 | 223.5530211 | 227.0650616 | 612.8487289 | 724.1253914 | 616.5383831 | -1.506251242 | 29.16930611 | 28.40854943 |
| B7LD53  | TY-2482_chromosome | - | 4998680 | 4999408 | 501.9275206 | 483.1877368 | 450.0203173 | 555.1672507 | 780.0782916 | 627.6644549 | -0.458722457 | 3.278706025 | 2.992723958 |
| B7LD54  | TY-2482_chromosome | - | 4999703 | 5000368 | 2618.511054 | 2557.335636 | 2715.289561 | 1381.830705 | 1461.481975 | 1273.382334 | 0.949456408  | 16.57070204 | 15.95949867 |
| B7LD55  | TY-2482_chromosome | - | 5000371 | 5001084 | 2886.601497 | 2899.632784 | 2808.944493 | 1549.973561 | 1728.48795  | 1505.053226 | 0.8370477    | 13.51233885 | 12.94664412 |
| B7LD56  | TY-2482_chromosome | - | 5001094 | 5001822 | 4610.744628 | 4301.165845 | 4218.463112 | 2425.90554  | 2712.993138 | 2274.665683 | 0.826080429  | 4.696960701 | 4.348157923 |
| B7LD57  | TY-2482_chromosome | - | 5001843 | 5002568 | 2690.982072 | 2396.547988 | 2353.662875 | 2472.169174 | 2978.346674 | 2130.091674 | -0.022868079 | 0.055488893 | 0.044118586 |
| B7LD58  | TY-2482_chromosome | - | 5002789 | 5003301 | 2163.093502 | 1986.088499 | 2096.191654 | 760.6285348 | 708.6847251 | 652.7607722 | 1.571613808  | 51.03934777 | 50.09312164 |
| B7LD59  | TY-2482_chromosome | + | 5003427 | 5003747 | 1825.729175 | 2068.882009 | 1919.554189 | 1042.941708 | 972.5150178 | 1142.713044 | 0.854922931  | 15.15397341 | 14.55881809 |
| B7LD60  | TY-2482_chromosome | + | 5003747 | 5004574 | 3065.923729 | 3289.012629 | 3485.21659  | 2030.999982 | 1878.804838 | 1861.076634 | 0.770735403  | 5.488281844 | 5.105347764 |
| B7LD61  | TY-2482_chromosome | - | 5004577 | 5005587 | 988.3776714 | 1037.540442 | 990.017842  | 1238.491801 | 1364.749394 | 1360.114363 | -0.406034542 | 4.03899715  | 3.718938723 |
| B7LD62  | TY-2482_chromosome | - | 5005689 | 5007116 | 1392.905951 | 1324.687485 | 1423.676767 | 930.3147588 | 920.3041157 | 851.3210278 | 0.631896696  | 9.311647905 | 8.822351846 |
| B7LD63  | TY-2482_chromosome | - | 5007130 | 5008128 | 2439.853953 | 2538.27358  | 2509.974543 | 1359.89291  | 1314.78589  | 1159.54065  | 0.953320402  | 17.4520569  | 16.82786701 |
| B7LD64  | TY-2482_chromosome | - | 5008168 | 5009883 | 3276.970439 | 3367.182066 | 3504.03462  | 842.6791513 | 793.3190873 | 641.7045556 | 2.150836307  | 70.58115356 | 69.49353915 |
| B7LD65  | TY-2482_chromosome | - | 5010019 | 5010984 | 416.0222065 | 346.4754967 | 459.1794017 | 941.4454863 | 806.7988153 | 859.8813091 | -1.027730833 | 17.74286386 | 17.11462715 |
| B7LD66  | TY-2482_chromosome | - | 5010999 | 5012648 | 416.2606351 | 387.7677942 | 463.6289067 | 1238.12303  | 905.3248411 | 1046.304586 | -1.295654085 | 24.86626072 | 24.15025737 |
| B7LD67  | TY-2482_chromosome | - | 5012795 | 5013691 | 271.4671025 | 198.8809408 | 184.6489292 | 450.7780956 | 542.0565841 | 460.0304067 | -1.125919423 | 13.12330663 | 12.56333475 |
| C6V2L9  | TY-2482_chromosome | - | 5013842 | 5014126 | 332.896357  | 218.543766  | 223.3782493 | 139.5383713 | 165.4566281 | 147.6152115 | 0.826753005  | 5.199117765 | 4.829426638 |
| B7LD68  | TY-2482_chromosome | - | 5014189 | 5014881 | 283.3814258 | 301.2644002 | 335.7739194 | 245.0059702 | 217.4880755 | 266.6417678 | 1.796707606  | 1.596467753 |             |
| B7LD69  | TY-2482_chromosome | + | 5015307 | 5016962 | 2403.926454 | 2394.909605 | 2407.983915 | 2599.230548 | 2579.256417 | 2600.676861 | -0.108792153 | 0.302755621 | 0.25000156  |
| B7LD70  | TY-2482_chromosome | - | 5016965 | 5017954 | 4089.203717 | 3895.814069 | 3951.080821 | 4868.450604 | 4869.074532 | 4932.092845 | -0.288877672 | 0.52247405  | 0.436453379 |
| B7LD71  | TY-2482_chromosome | + | 5018069 | 5019181 | 689.1497323 | 673.421773  | 691.056661  | 881.5592781 | 917.2498836 | 940.2456973 | -0.406162069 | 4.198213458 | 3.872666822 |
| B7LD72  | TY-2482_chromosome | + | 5019181 | 5021124 | 767.4937878 | 868.0720727 | 764.5912142 | 1071.494194 | 979.2195186 | 931.3758106 | -0.357203798 | 2.542885819 | 2.294243893 |
| Q1RE42  | TY-2482_chromosome | - | 5021301 | 5021582 | 1923.07699  | 1983.814083 | 2062.990758 | 2289.816911 | 2604.806766 | 2557.572301 | -0.312675428 | 2.376459803 | 2.137879202 |
| B7LD74  | TY-2482_chromosome | + | 5021747 | 5022064 | 2420.367022 | 2679.321739 | 2349.363242 | 1307.400282 | 1232.104582 | 1062.725366 | 1.003131346  | 18.89255706 | 18.25308797 |
| B7LD75  | TY-2482_chromosome | + | 5022098 | 5024371 | 21862.83719 | 22578.05251 | 24126.75445 | 23369.13007 | 22375.01036 | 19472.11279 | 0.07535337   | 0.07677019  | 0.06073097  |
| D8EA E3 | TY-2482_chromosome | - | 5024456 | 5024692 | 34.18961903 | 65.6740963  | 63.98611078 | 99.68739525 | 114.0084139 | 132.9272166 | -1.133888728 | 5.284094655 | 4.90948614  |
| C5W2A2  | TY-2482_chromosome | + | 5024674 | 5024914 | 74.12429502 | 51.37201829 | 67.4594015  | 222.8779977 | 309.460416  | 309.5007899 | -2.040703868 | 25.20741094 | 24.48822927 |
| serX    | TY-2482_chromosome | - | 5024718 | 5024805 | 38.26358346 | 29.81807129 | 27.71251254 | 136.582588  | 207.8980269 | 189.0812883 | -2.456064323 | 23.35708173 | 22.66183662 |
| B7LD76  | TY-2482_chromosome | - | 5025062 | 5025277 | 3957.226741 | 3623.528093 | 3505.922043 | 6067.858954 | 6544.624094 | 6970.133048 | -0.811908458 | 2.247983968 | 2.018499653 |
| B7LD77  | TY-2482_chromosome | - | 5025565 | 5025626 | 750.3728995 | 658.5229175 | 672.583215  | 653.2668225 | 695.3796898 | 696.6512321 | -0.045587665 | 0.103935896 |             |
| B7LD78  | TY-2482_chromosome | - | 5026311 | 5028029 | 3681.002376 | 3291.93918  | 3445.357415 | 2132.196655 | 2047.178933 | 2006.131891 | 0.771144733  | 5.27637391  | 4.902175913 |
| B7LD79  | TY-2482_chromosome | - | 5028033 | 5029796 | 1912.273586 | 2394.344508 | 2169.469214 | 1678.333015 | 1619.422787 | 1425.167655 | 0.403603213  | 3.896655671 | 3.58345087  |
| B7LD80  | TY-2482_chromosome | - | 5029922 | 5030884 | 7578.28837  | 6359.974856 | 6792.985931 | 4513.452616 | 4452.858026 | 4378.556614 | 0.666247136  | 1.463509912 | 1.289111811 |
| E9VK05  | TY-2482_chromosome | + | 5031429 | 5031993 | 5105.324167 | 4831.371051 | 5533.93805  | 5554.349842 | 4819.28634  | 4753.965498 | 0.059181005  | 0.039461337 | 0.031471463 |
| C8U4H0  | TY-2482_chromosome | + | 5032058 | 5034307 | 6718.766608 | 6102.209127 | 6205.386359 | 9193.222297 | 9018.57197  | 9055.203056 | -0.505478482 | 0.995687481 | 0.859229569 |
| B7LD82  | TY-2482_chromosome | + | 5034287 | 5036005 | 6263.872027 | 5962.207391 | 5969.732333 | 4267.315594 | 4278.053645 | 3963.998266 | 0.543750345  | 1.181815856 | 1.030207304 |
| B7LD83  | TY-2482_chromosome | + | 5036160 | 5036771 | 3143.538885 | 3019.573606 | 3364.54934  | 1106.477752 | 1077.306731 | 948.6953305 | 1.624348912  | 44.62882704 | 43.72851211 |
| B7LD84  | TY-2482_chromosome | + | 5036785 | 5038125 | 2768.259731 | 3014.163461 | 2818.986211 | 2750.17752  | 3034.159264 | 2789.723033 | -0.018543944 | 0.008182638 | 0.006351825 |

|               |                    |   |          |         |             |             |             |             |             |             |              |             |              |
|---------------|--------------------|---|----------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|--------------|
| <b>B7LD85</b> | TY-2482_chromosome | + | 5038219  | 5039508 | 20664.56674 | 20056.34338 | 20680.27688 | 38906.44336 | 34384.52563 | 35456.20686 | -0.818197416 | 1.650719092 | 1.459625492  |
| <b>B7LD86</b> | TY-2482_chromosome | + | 5039750  | 5042191 | 14344.13588 | 15177.97805 | 16293.64143 | 12479.78701 | 10822.57418 | 11035.56495 | 0.420010865  | 0.652736483 | 0.55138872   |
| <b>A7ZJW5</b> | TY-2482_chromosome | - | 5042403  | 5043305 | 2130.09077  | 2492.910666 | 2610.141872 | 4884.149063 | 4644.791409 | 4911.912056 | -1.004817411 | 6.486809513 | 6.076560472  |
| <b>Q1RDV9</b> | TY-2482_chromosome | - | 5043726  | 5044508 | 981.841279  | 978.8787299 | 1018.547874 | 416.4947953 | 426.3935218 | 413.7637582 | 1.252506963  | 32.62775245 | 31.82101533  |
| <b>B7LD90</b> | TY-2482_chromosome | + | 5044663  | 5045808 | 174.9618761 | 147.8559337 | 153.9218641 | 271.5348413 | 389.8561901 | 365.9210558 | -1.075267956 | 10.7247522  | 10.20343661  |
| <b>B7LD91</b> | TY-2482_chromosome | + | 50446021 | 5047496 | 98.7374008  | 77.81060608 | 94.71683681 | 170.9768533 | 151.2649234 | 144.1036216 | -0.732878003 | 4.509478098 | 4.168375721  |
| <b>B7LD92</b> | TY-2482_chromosome | - | 5047503  | 5048408 | 133.5453795 | 143.3838349 | 139.3670838 | 176.8442625 | 146.7235945 | 196.8710227 | -0.330851957 | 1.218291336 | 1.06442355   |
| <b>B7LD93</b> | TY-2482_chromosome | + | 5048508  | 5049095 | 93.69812294 | 132.5543713 | 117.681601  | 65.11929384 | 62.88038004 | 77.50236881 | 0.687584008  | 3.448835402 | 3.155907186  |
| <b>B7LD94</b> | TY-2482_chromosome | - | 5049183  | 5049920 | 3226.251257 | 3134.411604 | 3185.262232 | 5311.399592 | 4787.782873 | 5005.661242 | -0.657383858 | 2.963574903 | 2.694244617  |
| <b>B7LD95</b> | TY-2482_chromosome | - | 5050115  | 5052394 | 88169.64157 | 81888.41856 | 84682.3663  | 96437.61824 | 84777.70888 | 81220.25838 | -0.033872163 | 0.041475013 | 0.032686885  |
| <b>B7LD96</b> | TY-2482_chromosome | - | 5052452  | 5053306 | 17080.8583  | 18008.65991 | 16828.60043 | 9072.773869 | 7959.040348 | 7090.949682 | 1.078175672  | 2.893304742 | 2.627197435  |
| <b>B7LD97</b> | TY-2482_chromosome | - | 5053714  | 5055471 | 4084.676403 | 4095.577048 | 4312.914729 | 2108.769972 | 2385.015119 | 2252.158146 | 0.900278217  | 5.779758707 | 5.388123571  |
| <b>B7LD98</b> | TY-2482_chromosome | + | 5055601  | 5056290 | 1062.212917 | 1264.117627 | 1271.228965 | 694.7489671 | 696.1878526 | 665.9498822 | 0.786731309  | 13.22718759 | 12.66595047  |
| <b>B7LD99</b> | TY-2482_chromosome | + | 5056492  | 5057577 | 6958.167396 | 6856.70452  | 7143.341775 | 6997.367714 | 6471.49329  | 6232.754918 | 0.094853273  | 0.111427046 | 0.088747525  |
| <b>B7LDA0</b> | TY-2482_chromosome | + | 5057651  | 5058931 | 1539.720516 | 1795.465282 | 1607.856879 | 2040.241331 | 2107.946309 | 1917.122189 | -0.33763283  | 2.121737089 | 1.899714309  |
| <b>B5YT43</b> | TY-2482_chromosome | + | 5059079  | 5059864 | 110.7769483 | 112.3115658 | 120.5029954 | 132.7090864 | 130.1826668 | 117.8815043 | -0.142454099 | 0.385588292 | 0.318858943  |
| <b>B7LDA2</b> | TY-2482_chromosome | + | 5060040  | 5060720 | 2623.010811 | 2429.733545 | 2469.853867 | 4649.405485 | 5740.861337 | 5376.915979 | -1.051988677 | 7.347030484 | 6.910256681  |
| <b>B7LDA3</b> | TY-2482_chromosome | + | 5060834  | 5062504 | 205914.2802 | 193923.1465 | 199274.5284 | 68137.92867 | 65765.22948 | 68399.14147 | 1.578635512  | 4.304041178 | 3.974796823  |
| <b>A1A9I9</b> | TY-2482_chromosome | - | 5062679  | 5062984 | 3380.359874 | 3353.376968 | 2892.674371 | 2897.602289 | 3078.135503 | 2820.478909 | 0.101896747  | 0.313617815 | 0.259190548  |
| <b>B7LDA5</b> | TY-2482_chromosome | + | 5063158  | 5065419 | 310.9568035 | 372.5358492 | 322.0318238 | 266.7441176 | 290.3033478 | 316.3055654 | 0.159238686  | 0.778020919 | 0.663738142  |
| <b>B7LDA6</b> | TY-2482_chromosome | + | 5065459  | 5067204 | 2614.90125  | 2391.600605 | 2508.561353 | 5038.89012  | 5252.106496 | 4776.115554 | -0.9868196   | 6.720569981 | 6.303556091  |
| <b>B7LE13</b> | TY-2482_chromosome | + | 5067204  | 5068187 | 2174.402373 | 2023.842441 | 2025.947382 | 1649.065002 | 1760.193937 | 1583.365179 | 0.324546914  | 2.448364757 | 2.206152404  |
| <b>B7LE14</b> | TY-2482_chromosome | + | 5068227  | 5069456 | 793.1599391 | 809.9588857 | 758.8083231 | 354.4395667 | 377.779638  | 371.0782205 | 1.084143977  | 22.51821623 | 21.83404198  |
| <b>A1A9J4</b> | TY-2482_chromosome | - | 5069519  | 5069785 | 1666.612621 | 1876.239332 | 1897.714629 | 746.8368657 | 573.9303445 | 531.3092059 | 1.532479164  | 39.22117013 | 38.35985229  |
| <b>E7H9E7</b> | TY-2482_chromosome | + | 5069690  | 5070530 | 3478.808587 | 3843.326421 | 3923.502238 | 2063.331274 | 1844.093921 | 1659.433863 | 1.00004675   | 8.56665199  | 8.096777772  |
| <b>B7LE17</b> | TY-2482_chromosome | + | 5070590  | 5071480 | 3916.952166 | 3526.662659 | 4038.398329 | 3247.482694 | 2709.712089 | 3459.016103 | 0.326426293  | 0.842848343 | 0.722295291  |
| <b>B7LE18</b> | TY-2482_chromosome | - | 5071463  | 5072239 | 849.8972265 | 744.2474646 | 880.4166207 | 1172.409677 | 1107.937277 | 1383.806361 | -0.514706627 | 6.075661868 | 5.762403068  |
| <b>B7LE20</b> | TY-2482_chromosome | + | 5072375  | 5073157 | 1529.280852 | 1413.962672 | 1511.386997 | 2108.148135 | 2212.206772 | 2247.254133 | -0.536913288 | 6.50172529  | 6.091028523  |
| <b>B7LE21</b> | TY-2482_chromosome | + | 5073157  | 5074476 | 1635.507666 | 1744.060707 | 1784.265253 | 1980.917516 | 1853.457561 | 1654.43109  | -0.096999269 | 0.364326549 | 0.301032772  |
| <b>B5YT57</b> | TY-2482_chromosome | + | 5074433  | 5075161 | 1678.626887 | 1514.011921 | 1581.909374 | 1449.243871 | 1309.602744 | 1141.868686 | 0.303214626  | 2.154545076 | 1.929903426  |
| <b>B7LE23</b> | TY-2482_chromosome | + | 5075164  | 5079621 | 13579.63991 | 13089.82172 | 13335.76618 | 7650.057499 | 7456.155403 | 6768.04897  | 0.874334549  | 2.075846676 | 1.8584427067 |
| <b>B7LE24</b> | TY-2482_chromosome | + | 5079885  | 5081729 | 5429.087567 | 5623.482082 | 6158.912619 | 5355.519476 | 5240.10094  | 4985.185674 | 0.155051185  | 0.201257201 | 0.163468641  |
| <b>B7LE25</b> | TY-2482_chromosome | + | 5081913  | 5082458 | 1726.263658 | 1664.014351 | 1857.40953  | 2445.568898 | 2443.735402 | 2467.186211 | -0.462129442 | 4.944855821 | 4.58463912   |
| <b>B7LE26</b> | TY-2482_chromosome | + | 5082488  | 5083132 | 2353.715192 | 2183.005933 | 2686.117169 | 3327.10494  | 3130.735506 | 3432.836159 | -0.404713895 | 1.995131506 | 1.780586828  |
| <b>B7LS11</b> | TY-2482_chromosome | - | 5083380  | 5084357 | 1084.500366 | 1070.13071  | 1259.499438 | 1477.334774 | 1421.081653 | 1420.612477 | 0.8707786325 | 2.882114753 | 2.616488836  |
| <b>B7LE28</b> | TY-2482_chromosome | - | 5084639  | 5085826 | 12593.57584 | 13559.87514 | 13680.42274 | 5975.578965 | 5161.021834 | 4645.403765 | 1.320693587  | 4.230139004 | 3.903117056  |
| <b>E7H9D3</b> | TY-2482_chromosome | + | 5085813  | 5086011 | 954.3489911 | 1094.460771 | 909.8668909 | 984.3987354 | 1040.606353 | 907.8450193 | -0.043313688 | 0.010642371 | 0.008461954  |
| <b>B7LE29</b> | TY-2482_chromosome | - | 5086014  | 5087099 | 12889.32691 | 13095.88607 | 14427.30727 | 24693.27776 | 22051.15723 | 20678.46784 | -0.727204772 | 1.44588548  | 1.272396353  |
| <b>B7LE30</b> | TY-2482_chromosome | - | 5087704  | 5089101 | 6488.934655 | 5336.642989 | 5171.275562 | 8727.792695 | 8707.792553 | 8324.864479 | -0.584110764 | 1.239794075 | 1.084344925  |
| <b>B7LE31</b> | TY-2482_chromosome | - | 5089273  | 5090472 | 1866.741106 | 1424.820425 | 1744.032352 | 5369.918043 | 5232.130345 | 4950.625749 | -1.565035134 | 15.19991022 | 14.60372617  |
| <b>B7LE32</b> | TY-2482_chromosome | + | 5090738  | 5093347 | 10987.96726 | 12436.77396 | 12520.90396 | 10495.8225  | 9472.952542 | 8912.036481 | 0.297723872  | 0.466174543 | 0.388660456  |
| <b>D8ESU4</b> | TY-2482_chromosome | + | 5093334  | 5093564 | 541.2871553 | 600.3610663 | 486.1465718 | 482.0565559 | 568.4735316 | 566.0816453 | -0.03839941  | 4.56E-05    | 0            |
| <b>B7LE33</b> | TY-2482_chromosome | - | 5093560  | 5094324 | 119.9303566 | 107.6352255 | 109.3475159 | 100.1666613 | 94.13652159 | 124.2806329 | 0.10118324   | 0.181528473 | 0.146766366  |
| <b>B7LE35</b> | TY-2482_chromosome | - | 5095126  | 5096268 | 59.07851542 | 66.62228022 | 71.53310558 | 31.64088665 | 33.08130196 | 45.6428061  | 0.8458486    | 3.284120606 | 2.997802267  |
| <b>B7LE36</b> | TY-2482_chromosome | - | 5096268  | 5097224 | 53.72678936 | 44.36492784 | 61.3401811  | 18.2805214  | 24.94591133 | 27.21858179 | 1.250016513  | 5.088636635 | 4.723002469  |
| <b>B7LE37</b> | TY-2482_chromosome | - | 5097220  | 5097792 | 57.29709279 | 54.1094269  | 71.28689463 | 28.79708891 | 28.1246078  | 35.54899018 | 1.035022808  | 4.317432469 | 3.987816605  |
| <b>B7LE38</b> | TY-2482_chromosome | + | 5098139  | 5098687 | 46.04332184 | 54.27447438 | 54.41602351 | 40.39072821 | 45.5764525  | 54.08540895 | 0.133604612  | 0.234257781 | 0.192177267  |
| <b>B7LE39</b> | TY-2482_chromosome | + | 5098773  | 5099471 | 12.09561593 | 19.55160578 | 18.44255573 | 31.63341088 | 31.56756382 | 28.21243891 | -0.924058683 | 1.888852154 | 1.68221937   |
| <b>B7LE40</b> | TY-2482_chromosome | + | 5099499  | 5102096 | 156.0014496 | 155.5463724 | 150.9792205 | 317.4351661 | 332.8776496 | 322.185449  | -1.077619282 | 12.55709604 | 12.00680678  |
| <b>B7LE41</b> | TY-2482_chromosome | + | 5102090  | 5103157 | 147.6364126 | 160.9852397 | 117.117361  | 177.642812  | 191.4954888 | 187.388939  | -0.452480582 | 1.723372901 | 1.527661994  |
| <b>B7LE42</b> | TY-2482_chromosome | + | 5103172  | 5103711 | 52.33461818 | 62.93050179 | 53.32518807 | 49.7265869  | 55.84549838 | 46.54003127 | 0.095293631  | 0.244543494 | 0.1999963713 |
| <b>B7LE43</b> | TY-2482_chromosome | + | 5103722  | 5104234 | 39.56834107 | 48.21928253 | 47.25132606 | 31.83651207 | 33.73912723 | 30.62126425 | 0.460518528  | 1.118179053 | 0.972085815  |
| <b>B7LE44</b> | TY-2482_chromosome | + | 5104230  | 5104937 | 162.5891936 | 130.5246372 | 188.9411928 | 115.1381879 | 140.3687014 | 122.7299097 | 0.434238938  | 1.420623585 | 1.249592125  |
| <b>B7LE45</b> | TY-2482_chromosome | + | 5105051  | 5106058 | 1002.59277  | 903.5515226 | 982.6598247 | 2132.298271 | 2206.86727  | 2106.081274 | -1.131543597 | 24.80760746 | 24.09205627  |
| <b>B7LE46</b> | TY-2482_chromosome | + | 5106235  | 5106774 | 1857.262588 | 2259.537979 | 2433.254859 | 1034.496113 | 825.8940704 | 720.3810022 | 1.325950428  | 24.30860439 | 23.6006867   |



|               |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|---------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>B7LE47</b> | TY-2482_chromosome | - | 5106777 | 5107883 | 835.5637421 | 871.0332915 | 831.9848163 | 1209.670399 | 1169.84879  | 1117.042365 | -0.478348274 | 5.194175916 | 4.824688539 |
| <b>B7LE48</b> | TY-2482_chromosome | + | 5108127 | 5110232 | 1898.218097 | 1828.445044 | 1794.639933 | 2456.99175  | 2759.139909 | 2333.637117 | -0.453233757 | 4.16851998  | 3.844443662 |
| <b>B7LE49</b> | TY-2482_chromosome | + | 5110246 | 5112150 | 4101.114597 | 4360.47724  | 4413.523341 | 1506.43484  | 1583.241651 | 1590.241373 | 1.457086681  | 15.23189413 | 14.63467891 |
| <b>B7LE50</b> | TY-2482_chromosome | + | 5112283 | 5113533 | 1480.986322 | 1469.185332 | 1647.578369 | 982.5020869 | 1073.666455 | 1196.69676  | 0.528753374  | 5.708444681 | 5.318521053 |
| <b>B7LE51</b> | TY-2482_chromosome | + | 5113541 | 5115178 | 2342.53712  | 2543.078169 | 2515.647898 | 2157.527795 | 2086.901586 | 2194.283444 | 0.190321123  | 0.780302989 | 0.665793781 |
| <b>C8UHL5</b> | TY-2482_chromosome | + | 5115178 | 5115738 | 1006.744621 | 1174.536443 | 1120.588247 | 771.8030723 | 740.8362246 | 759.1417058 | 0.152043722  | 6.561122182 | 6.148854727 |
| <b>C6UNL9</b> | TY-2482_chromosome | + | 5115981 | 5116175 | 1080.29995  | 1058.325459 | 859.8889374 | 1117.928225 | 1241.374215 | 1250.605744 | -0.300120574 | 1.860775252 | 1.655540264 |
| <b>B7LE55</b> | TY-2482_chromosome | - | 5116824 | 5118581 | 2784.799015 | 3087.701551 | 3146.231962 | 4675.409226 | 4497.906535 | 4020.857506 | -0.561967253 | 2.348676128 | 2.112350046 |
| <b>B7LE56</b> | TY-2482_chromosome | + | 5118767 | 5119216 | 1086.310537 | 1252.312895 | 1182.422653 | 711.0043564 | 677.7168562 | 747.9334581 | 0.694972373  | 11.02457592 | 10.49802779 |
| <b>B7LE57</b> | TY-2482_chromosome | - | 5119298 | 5120335 | 208709.2058 | 165667.4516 | 185912.95   | 74873.388   | 73691.67689 | 77524.02473 | 1.35712638   | 3.172531141 | 2.892392063 |
| <b>D3H0I0</b> | TY-2482_chromosome | + | 5120490 | 5120705 | 438.2675245 | 395.6713958 | 373.9314731 | 428.8618108 | 448.3664235 | 498.6350215 | -0.181342265 | 0.854638083 | 0.731981728 |
| <b>B7LE58</b> | TY-2482_chromosome | - | 5120695 | 5121201 | 1427.533979 | 1116.26737  | 1146.893862 | 1350.579777 | 1347.227159 | 1398.753392 | -0.116311387 | 0.734382409 | 0.624715637 |
| <b>B7LE59</b> | TY-2482_chromosome | + | 5121420 | 5122046 | 645.5854471 | 693.153092  | 676.6956978 | 488.9505456 | 467.2790657 | 470.8635263 | 0.483885118  | 5.075906209 | 4.710675662 |
| <b>B7LE60</b> | TY-2482_chromosome | - | 5122015 | 5124165 | 1127.62858  | 1024.670085 | 1050.370174 | 1628.899781 | 1790.392487 | 1668.279215 | -0.652130329 | 9.917942291 | 9.413904463 |
| <b>C8U5C5</b> | TY-2482_chromosome | - | 5124187 | 5124630 | 267.420058  | 201.6495891 | 242.7684733 | 457.9286274 | 534.1855916 | 593.7074273 | -1.08654524  | 14.55399933 | 13.97066917 |
| <b>B7LE62</b> | TY-2482_chromosome | + | 5124753 | 5126804 | 3156.879187 | 3404.873935 | 3476.719656 | 2149.012538 | 1960.451457 | 2077.71049  | 0.693042644  | 4.655655655 | 4.308790831 |
| <b>B7LE63</b> | TY-2482_chromosome | + | 5126842 | 5127297 | 3306.317307 | 3510.545784 | 3555.795381 | 3763.300453 | 3129.810916 | 3127.853645 | 0.039597174  | 0.098184979 | 0.077882155 |
| <b>B7LE64</b> | TY-2482_chromosome | - | 5127396 | 5128055 | 230.3485197 | 184.2074176 | 223.9552073 | 131.8655087 | 139.4426474 | 134.8231743 | 0.708603352  | 4.604227526 | 4.259676887 |
| <b>B7LE65</b> | TY-2482_chromosome | + | 5128228 | 5128638 | 1127.568731 | 960.6885458 | 1087.507809 | 665.0724315 | 816.1788184 | 798.5807508 | 0.523289136  | 4.957783423 | 4.597167737 |
| <b>Q1RDP7</b> | TY-2482_chromosome | + | 5128610 | 5129002 | 2045.824462 | 1878.945171 | 1803.416143 | 1434.890143 | 1481.435688 | 1365.176428 | 0.42020856   | 4.011838664 | 3.693775329 |
| <b>B7LE67</b> | TY-2482_chromosome | - | 5129064 | 5130164 | 1415.841552 | 1573.129063 | 1332.260307 | 1777.242242 | 2119.887384 | 1733.737021 | -0.428938583 | 3.042133244 | 2.768740304 |
| <b>B7LE68</b> | TY-2482_chromosome | + | 5130133 | 5130621 | 580.7251466 | 586.261833  | 684.8056451 | 802.3652784 | 881.7648008 | 880.8587489 | -0.4385788   | 4.552888314 | 4.210830875 |
| <b>B7LE69</b> | TY-2482_chromosome | - | 5130624 | 5130950 | 601.4316818 | 600.4760246 | 603.448612  | 713.8611337 | 753.1658465 | 787.5125965 | -0.316426053 | 2.51261265  | 2.265202766 |
| <b>B7LE70</b> | TY-2482_chromosome | - | 5131044 | 5131700 | 5463.907125 | 4764.803008 | 5058.802211 | 3097.625093 | 3043.285858 | 3117.733649 | 0.750250312  | 3.710894915 | 3.405141428 |
| <b>B7LEU9</b> | TY-2482_chromosome | + | 5132421 | 5133536 | 56.6633334  | 85.35768598 | 89.86021327 | 35.95949004 | 35.19682296 | 34.3886966  | 1.102289513  | 5.521947232 | 5.138171883 |
| <b>B7LEV1</b> | TY-2482_chromosome | + | 5133536 | 5135326 | 76.49105705 | 74.02324487 | 80.33264119 | 71.08926574 | 66.77829704 | 67.34082334 | 0.255670392  | 0.593294739 | 0.500109624 |
| <b>B7LEV2</b> | TY-2482_chromosome | + | 5135348 | 5136052 | 50.81322506 | 52.03704152 | 61.40034793 | 30.5397784  | 24.06247315 | 31.64273399 | 0.951676953  | 3.546038277 | 3.24657143  |
| <b>B7LEV3</b> | TY-2482_chromosome | + | 5136052 | 5136636 | 77.03650527 | 107.8374894 | 79.37071055 | 50.79605285 | 59.74907414 | 48.84397784 | 0.630754481  | 2.839516977 | 2.576608907 |
| <b>B7LEV4</b> | TY-2482_chromosome | + | 5136636 | 5137031 | 25.44817246 | 43.67968503 | 37.15297979 | 31.23361852 | 29.1978754  | 29.84441595 | 0.152256242  | 0.350289886 | 0.289937092 |
| <b>B7LEV5</b> | TY-2482_chromosome | + | 5137031 | 5137885 | 50.70501236 | 58.72029625 | 53.22239859 | 52.13532057 | 63.0281224  | 43.83095961 | -0.00741025  | 0.030539068 | 0.024141314 |
| <b>B7LEV6</b> | TY-2482_chromosome | + | 5138022 | 5139563 | 112.5364763 | 138.402831  | 110.9559527 | 112.0546307 | 115.9264017 | 88.42080228 | 0.120768692  | 0.433693911 | 0.361246047 |
| <b>B7LEV7</b> | TY-2482_chromosome | + | 5139578 | 5140711 | 110.2814479 | 109.8333147 | 96.62785917 | 96.87161434 | 111.0895718 | 105.9083349 | -0.00795844  | 0           | 0           |
| <b>B7LEV8</b> | TY-2482_chromosome | - | 5140899 | 5142194 | 204.5332488 | 213.0455185 | 171.553153  | 151.8504805 | 164.8248423 | 180.4822498 | 0.205716866  | 0.812327522 | 0.694407607 |
| <b>B7LEV9</b> | TY-2482_chromosome | + | 5142315 | 5144492 | 16485.38578 | 14691.44172 | 15196.42008 | 8380.328708 | 8235.101376 | 8499.643355 | 0.904758292  | 2.058154507 | 1.84017439  |
| <b>B7LEW0</b> | TY-2482_chromosome | - | 5144515 | 5144958 | 3399.74969  | 2975.915614 | 3163.743983 | 1190.302181 | 1187.905137 | 1165.560279 | 1.453983928  | 36.8684502  | 36.02285044 |
| <b>B7LEW1</b> | TY-2482_chromosome | - | 5144949 | 5146085 | 6463.96624  | 6014.554533 | 6736.593845 | 2359.75444  | 2477.209341 | 2285.057661 | 1.459716575  | 6.009452706 | 5.612642202 |
| <b>B7LEW2</b> | TY-2482_chromosome | - | 5146134 | 5148227 | 3749.53198  | 3628.499804 | 3602.001093 | 6374.117283 | 6798.626627 | 5673.101804 | -0.781552315 | 2.08186633  | 1.861725182 |
| <b>B7LEW3</b> | TY-2482_chromosome | - | 5148230 | 5148973 | 1124.441093 | 945.3202521 | 1146.19929  | 5113.720809 | 5604.336292 | 4981.912946 | -2.2354171   | 30.14747773 | 29.37605986 |
| <b>B7LEW4</b> | TY-2482_chromosome | - | 5148973 | 5149614 | 1776.582665 | 1697.33542  | 1877.572256 | 6408.606434 | 7224.683553 | 7118.583983 | -1.928011376 | 10.38645223 | 9.873152844 |
| <b>B7LF95</b> | TY-2482_chromosome | - | 5149724 | 5150026 | 23887.72213 | 23129.31295 | 24952.95629 | 24376.98954 | 25127.74251 | 27256.89178 | -0.07087195  | 0.100586335 | 0.079644909 |
| <b>B7LF96</b> | TY-2482_chromosome | - | 5150471 | 5150680 | 133.3966591 | 167.8952863 | 110.0022006 | 60.21436313 | 59.07190877 | 75.34520162 | 0.979711646  | 6.577671941 | 6.164729592 |
| <b>B7LF99</b> | TY-2482_chromosome | + | 5150966 | 5151175 | 6649.397749 | 7703.116112 | 5806.551    | 30491.15966 | 31737.79476 | 35614.86051 | -2.347422584 | 9.043769325 | 8.561660651 |
| <b>D6I8Q5</b> | TY-2482_chromosome | + | 5151117 | 5151374 | 4765.408133 | 5424.675366 | 3842.746656 | 21566.93617 | 24328.46376 | 27579.56364 | -2.463341384 | 10.11467432 | 9.605047036 |
| <b>C8TPT1</b> | TY-2482_chromosome | + | 5151352 | 5151579 | 710.1732763 | 787.9074208 | 594.1188292 | 1612.658654 | 2065.036748 | 2355.475865 | -1.582235748 | 29.68509529 | 28.91929448 |
| <b>B7LFA1</b> | TY-2482_chromosome | - | 5151797 | 5152867 | 199.3108401 | 192.2152152 | 154.420503  | 388.0350543 | 370.4370156 | 435.1390088 | -1.158226078 | 13.4355762  | 12.87115975 |
| <b>B7LFA2</b> | TY-2482_chromosome | + | 5152942 | 5155683 | 363.6708474 | 354.1462643 | 307.9614427 | 516.4556017 | 483.0609747 | 513.8577    | -0.583455209 | 5.146358356 | 4.778700447 |
| <b>B7LFA3</b> | TY-2482_chromosome | + | 5155766 | 5156791 | 276.9207531 | 334.2027311 | 298.9254437 | 374.7381772 | 338.4563313 | 394.4645294 | -0.324435071 | 1.537179273 | 1.356496427 |
| <b>B7LFA4</b> | TY-2482_chromosome | - | 5156770 | 5157459 | 335.0563849 | 339.8815095 | 357.5931873 | 266.6918945 | 248.0855046 | 262.9180293 | 0.416119378  | 2.794652111 | 2.533652332 |
| <b>B7LFA5</b> | TY-2482_chromosome | + | 5157589 | 5158758 | 66.40466974 | 112.4242541 | 91.82663451 | 31.74577559 | 27.39171958 | 38.94373179 | 1.373590351  | 8.238176618 | 7.775935189 |
| <b>B7LFA6</b> | TY-2482_chromosome | + | 5158761 | 5161304 | 285.6789748 | 262.5519207 | 257.4087397 | 127.7205249 | 125.4280531 | 150.7202249 | 1.006904855  | 10.36875908 | 9.85574327  |
| <b>B7LFA7</b> | TY-2482_chromosome | + | 5161304 | 5161900 | 250.3729838 | 259.8964926 | 244.4048651 | 202.2311146 | 183.485722  | 188.1554305 | 0.376617817  | 2.13060382  | 1.908290833 |
| <b>B7LFA8</b> | TY-2482_chromosome | - | 5161999 | 5162301 | 882.4123985 | 782.6254373 | 907.7585285 | 654.1969953 | 684.0636447 | 669.816086  | 0.398107772  | 3.266510203 | 2.981032055 |
| <b>B7LFA9</b> | TY-2482_chromosome | - | 5162304 | 5163221 | 2850.816638 | 2664.309701 | 2939.363994 | 1759.813338 | 1652.93817  | 1755.516513 | 0.736216597  | 10.01234328 | 9.505240163 |
| <b>B7LFB0</b> | TY-2482_chromosome | + | 5163554 | 5164738 | 103.7827672 | 116.0363972 | 81.2029517  | 56.91886983 | 87.54413879 | 60.1530303  | 0.479897877  | 1.857375291 | 1.652558766 |
| <b>B7LFB1</b> | TY-2482_chromosome | + | 5165030 | 5166268 | 3464.121255 | 3678.34547  | 3956.427709 | 4356.016677 | 3982.548804 | 4231.858849 | -0.172425294 | 0.460935988 | 0.384460635 |

|        |                    |   |         |         |             |             |             |              |             |             |              |             |             |
|--------|--------------------|---|---------|---------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|-------------|
| B7LFB2 | TY-2482_chromosome | - | 5166312 | 5166536 | 1419.088719 | 1401.780929 | 1502.63733  | 2782.917498  | 2622.611354 | 2351.480907 | -0.834517416 | 12.76761544 | 12.21422628 |
| B7LFB3 | TY-2482_chromosome | - | 5166560 | 5167150 | 3688.422196 | 3791.177821 | 4342.735183 | 4806.07218   | 4089.692746 | 3732.948414 | -0.079937259 | 0.197679607 | 0.160175673 |
| B7MPT9 | TY-2482_chromosome | - | 5167135 | 5168466 | 1809.344046 | 1845.817425 | 1993.912625 | 0            | 0           | 0           | 14.98797363  | 325.0237216 | 323.0330172 |
| C8TPU6 | TY-2482_chromosome | - | 5168498 | 5168779 | 209.9027751 | 216.8621073 | 221.1775621 | 0            | 0           | 0           | 11.85112179  | 95.9791643  | 94.76089667 |
| C8TPU7 | TY-2482_chromosome | - | 5168828 | 5169076 | 404.328832  | 353.7661159 | 382.1898173 | 0            | 0           | 0           | 12.69495763  | 146.3663725 | 144.9185179 |
| C8TPU8 | TY-2482_chromosome | - | 5169067 | 5169444 | 520.4518788 | 585.3067835 | 526.0324389 | 0            | 0           | 0           | 13.14932977  | 192.9971111 | 191.3632945 |
| C8TPU9 | TY-2482_chromosome | - | 5169444 | 5169794 | 362.7304182 | 382.7316836 | 380.6961951 | 0            | 0           | 0           | 12.64157366  | 146.9811947 | 145.5259581 |
| C8U7P4 | TY-2482_chromosome | - | 5169833 | 5170042 | 207.7069971 | 144.4839764 | 227.7182881 | 0            | 0           | 0           | 11.8009895   | 77.56378547 | 76.43605384 |
| C6UPU4 | TY-2482_chromosome | - | 5170005 | 5170628 | 403.2800151 | 436.3396991 | 398.1711891 | 0            | 0           | 0           | 12.75842732  | 155.4087318 | 153.9199723 |
| C8U7P2 | TY-2482_chromosome | - | 5170628 | 5171056 | 316.8958087 | 340.5424608 | 283.5102909 | 0            | 0           | 0           | 12.34663986  | 122.6105483 | 121.2682996 |
| C8U7P1 | TY-2482_chromosome | - | 5171115 | 5171750 | 509.8151137 | 437.1732692 | 462.7469791 | 0            | 0           | 0           | 12.99977076  | 169.6429151 | 168.0938596 |
| E1J6T9 | TY-2482_chromosome | + | 5171752 | 5172138 | 1109.111275 | 1088.466471 | 723.9435332 | 0            | 0           | 0           | 13.95349073  | 212.8647192 | 211.170766  |
| C8TPV1 | TY-2482_chromosome | - | 5172109 | 5173002 | 568.6253014 | 514.3494208 | 553.1128842 | 0            | 0           | 0           | 13.21170995  | 197.353949  | 195.7087528 |
| B7MXC9 | TY-2482_chromosome | - | 5173008 | 5173238 | 228.7478794 | 230.2210123 | 184.5515521 | 0            | 0           | 0           | 11.8009895   | 89.74428474 | 88.54843729 |
| C8TPV5 | TY-2482_chromosome | - | 5173201 | 5173605 | 277.6314141 | 285.4834825 | 231.9123318 | 0            | 0           | 0           | 12.10510436  | 106.4369292 | 105.1811344 |
| C8TPV6 | TY-2482_chromosome | - | 5173605 | 5174135 | 367.4777466 | 392.2920838 | 360.8110286 | 0            | 0           | 0           | 12.61807594  | 144.8381015 | 143.39268   |
| C8U7N0 | TY-2482_chromosome | - | 5174433 | 5174873 | 541.6035426 | 597.6167338 | 563.2645596 | 0            | 0           | 0           | 13.22213802  | 201.6430835 | 199.9862016 |
| C8U7M9 | TY-2482_chromosome | - | 5174953 | 5175771 | 2004.407248 | 2073.038738 | 2200.838874 | 0            | 0           | 0           | 15.13548407  | 325.0237216 | 323.0330172 |
| C8U7M8 | TY-2482_chromosome | - | 5175838 | 5176182 | 713.6415461 | 727.6139995 | 719.8401658 | 0            | 0           | 0           | 13.58467455  | 244.9551262 | 243.2062416 |
| C8U7M7 | TY-2482_chromosome | - | 5176260 | 5176844 | 535.6748307 | 693.6433878 | 616.3696024 | 0            | 0           | 0           | 13.30785919  | 194.4115393 | 192.7739626 |
| C8U7M6 | TY-2482_chromosome | - | 5176847 | 5177533 | 321.2126212 | 407.2665572 | 399.1272575 | 0            | 0           | 0           | 12.62070578  | 135.7475996 | 134.3371268 |
| C8U7M5 | TY-2482_chromosome | - | 5177533 | 5178480 | 421.9227599 | 569.4117382 | 472.8518679 | 0            | 0           | 0           | 12.95462433  | 156.8762229 | 155.3820683 |
| C8U7M4 | TY-2482_chromosome | - | 5178500 | 5178778 | 199.5347502 | 220.2899727 | 147.511296  | 0            | 0           | 0           | 11.57556956  | 75.34226478 | 74.221482   |
| C8U7M3 | TY-2482_chromosome | - | 5178802 | 5179080 | 167.3817025 | 188.726681  | 144.267822  | 0            | 0           | 0           | 11.4151605   | 72.69148649 | 71.58870813 |
| C8U7M2 | TY-2482_chromosome | - | 5179095 | 5179304 | 101.3260192 | 107.2040353 | 123.1182117 | 0            | 0           | 0           | 10.90427161  | 53.70874209 | 52.74606641 |
| B6ZXE1 | TY-2482_chromosome | - | 5180308 | 5181078 | 540.4294272 | 569.0648169 | 346.1719677 | 0            | 0           | 0           | 12.92301215  | 132.0236218 | 130.6285433 |
| Q32F72 | TY-2482_chromosome | - | 5181710 | 5182660 | 6142.018176 | 5664.155616 | 6141.919916 | 0            | 0           | 0           | 16.66719216  | 233.2902405 | 231.5510073 |
| Q32F73 | TY-2482_chromosome | - | 5182660 | 5184126 | 11996.46878 | 11423.24663 | 11515.48712 | 0            | 0           | 0           | 17.61092632  | 116.984577  | 115.6754685 |
| Q32F74 | TY-2482_chromosome | - | 5184224 | 5184934 | 7900.528083 | 7660.725546 | 7208.371042 | 0            | 0           | 0           | 16.9783603   | 231.1972498 | 229.462763  |
| E7DYT8 | TY-2482_chromosome | + | 5185030 | 5185230 | 283.0451964 | 279.9176835 | 308.6389572 | 0            | 0           | 0           | 12.29817796  | 120.6175127 | 119.2847261 |
| C8U7L4 | TY-2482_chromosome | + | 5185264 | 5185554 | 491.3683031 | 553.334311  | 535.8443079 | 0            | 0           | 0           | 13.11802914  | 189.8101016 | 188.1981868 |
| C8U7L3 | TY-2482_chromosome | + | 5185765 | 5186139 | 297.7292269 | 325.5623585 | 304.6836529 | 0            | 0           | 0           | 12.34663986  | 125.0333005 | 123.6714857 |
| C8U7L2 | TY-2482_chromosome | + | 5186136 | 5187653 | 830.452741  | 759.3075295 | 848.9239849 | 0            | 0           | 0           | 13.79371154  | 261.3581665 | 259.5629819 |
| C8U7L1 | TY-2482_chromosome | + | 5187646 | 5188614 | 264.1370265 | 314.5937602 | 320.0844777 | 0            | 0           | 0           | 12.30800145  | 118.113088  | 116.7913904 |
| C8U7L0 | TY-2482_chromosome | + | 5188617 | 5189063 | 112.1768278 | 107.4339752 | 114.8561224 | 0            | 0           | 0           | 10.91288026  | 54.86484731 | 54.86484702 |
| C8U7K9 | TY-2482_chromosome | + | 5189074 | 5189634 | 135.906596  | 122.6303859 | 109.670733  | 0            | 0           | 0           | 11.02829991  | 57.75966217 | 56.76639555 |
| B3BQ93 | TY-2482_chromosome | + | 5190956 | 5191995 | 235.046736  | 301.3238174 | 289.9812638 | 0.473404758  | 0           | 0           | 10.39258683  | 107.8751171 | 106.6145931 |
| C6UP08 | TY-2482_chromosome | + | 5192010 | 5192276 | 270.4613019 | 328.6677035 | 296.019777  | 0            | 0           | 0           | 12.27499298  | 117.4419468 | 116.1274876 |
| B7MRX3 | TY-2482_chromosome | + | 5192732 | 5194699 | 418.2474514 | 505.2737986 | 429.8320935 | 0            | 0           | 0           | 12.85985844  | 157.6907419 | 156.1855919 |
| C6V1Q5 | TY-2482_chromosome | + | 5194885 | 5195301 | 127.7373294 | 167.66333   | 157.8417624 | 0            | 0           | 0           | 11.29517563  | 67.16458717 | 66.09775636 |
| B6ZXG1 | TY-2482_chromosome | + | 5195382 | 5196132 | 119.6238737 | 169.647785  | 139.4493268 | 7.881984317  | 6.684506815 | 5.141927698 | 4.335018492  | 60.58843211 | 59.57320457 |
| D8ACV6 | TY-2482_chromosome | + | 5197139 | 5197753 | 140.3560332 | 185.7327986 | 139.7837646 | 43.696393628 | 34.89375888 | 46.00284829 | 1.815362786  | 19.3636165  | 18.71995497 |
| C8U7J7 | TY-2482_chromosome | + | 5197770 | 5198318 | 168.8936157 | 184.0286545 | 142.8367751 | 0            | 0           | 0           | 11.40908821  | 72.61586969 | 71.51419221 |
| C8UMI7 | TY-2482_chromosome | + | 5198340 | 5198555 | 291.4449864 | 306.2519594 | 158.2283083 | 0            | 0           | 0           | 11.95480605  | 76.24589964 | 75.12281291 |
| C8UMI9 | TY-2482_chromosome | + | 5199401 | 5201104 | 221.7393093 | 268.3467042 | 249.943714  | 0            | 0           | 0           | 12.0080047   | 102.234096  | 100.9967193 |
| B5YYP6 | TY-2482_chromosome | + | 5201107 | 5203248 | 577.0757746 | 573.1300705 | 587.5875589 | 0            | 0           | 0           | 13.2798476   | 209.5917468 | 207.9063094 |
| C8UMJ1 | TY-2482_chromosome | + | 5203409 | 5204413 | 461.7599692 | 426.9506208 | 515.3285393 | 0            | 0           | 0           | 13.00983724  | 166.8104789 | 165.2705668 |
| C8U7J2 | TY-2482_chromosome | + | 5204440 | 5205651 | 622.4535541 | 585.9492835 | 630.6209233 | 0            | 0           | 0           | 13.37637556  | 215.2056079 | 213.5073334 |
| C8UMJ3 | TY-2482_chromosome | + | 5205710 | 5206096 | 164.8198731 | 135.6277263 | 125.5375177 | 0            | 0           | 0           | 11.25511436  | 64.67515504 | 63.62230273 |
| C8UMJ4 | TY-2482_chromosome | + | 5206149 | 5206607 | 72.46943777 | 80.64905021 | 105.4631977 | 0            | 0           | 0           | 10.56516102  | 41.639013   | 40.76225196 |
| B5YYN8 | TY-2482_chromosome | + | 5206594 | 5207154 | 108.5808231 | 92.70081962 | 103.4318979 | 0            | 0           | 0           | 10.79675     | 50.42591286 | 49.48655018 |
| C8U7I8 | TY-2482_chromosome | + | 5207157 | 5207804 | 169.0596928 | 162.8798308 | 172.3360767 | 0            | 0           | 0           | 11.50330499  | 78.4201919  | 77.28776515 |
| C8U7I7 | TY-2482_chromosome | + | 5207804 | 5209993 | 288.8951486 | 413.554649  | 351.997101  | 0            | 0           | 0           | 12.48006883  | 120.9053077 | 119.5706451 |
| C6UNY7 | TY-2482_chromosome | + | 5210763 | 5212451 | 344.2930667 | 347.6257772 | 296.4668458 | 0            | 0           | 0           | 12.4299689   | 128.3027011 | 126.9224898 |
| C8UMK2 | TY-2482_chromosome | + | 5212451 | 5213716 | 161.2344637 | 153.9766277 | 187.7231497 | 0            | 0           | 0           | 11.52592823  | 76.49008235 | 75.36583904 |

|                |                    |   |         |         |             |             |             |             |             |             |              |             |             |
|----------------|--------------------|---|---------|---------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|-------------|-------------|
| <b>C6UNY5</b>  | TY-2482_chromosome | + | 5214018 | 5214632 | 114.1037781 | 134.388067  | 113.7458464 | 0           | 0           | 0           | 10.96348053  | 56.94660299 | 55.96516614 |
| <b>C8UMK5</b>  | TY-2482_chromosome | + | 5214726 | 5215457 | 225.056725  | 269.4421284 | 264.1663593 | 0           | 0           | 0           | 12.05542871  | 104.4145958 | 103.1681077 |
| <b>C6UNY3</b>  | TY-2482_chromosome | + | 5215890 | 5216288 | 558.9757225 | 425.0423883 | 357.3007739 | 0           | 0           | 0           | 12.90586475  | 134.4986684 | 133.0926498 |
| <b>C8UML0</b>  | TY-2482_chromosome | + | 5217762 | 5219024 | 211.8971874 | 270.3549416 | 217.2630995 | 0           | 0           | 0           | 11.8908817   | 94.03981584 | 92.82867964 |
| <b>C8UML1</b>  | TY-2482_chromosome | + | 5219097 | 5227475 | 1499.073111 | 1766.930108 | 1537.535486 | 0           | 0           | 0           | 14.69417032  | 325.0237216 | 323.0330172 |
| <b>C8TNB3</b>  | TY-2482_chromosome | + | 5227816 | 5228184 | 279.4192572 | 239.1240303 | 292.7575918 | 2.702581888 | 1.612864041 | 0.61036578  | 7.31729101   | 112.0345127 | 110.7545395 |
| <b>B7LFB4</b>  | TY-2482_chromosome | + | 5228391 | 5228618 | 66.61163777 | 102.3729745 | 112.6641648 | 30.9907069  | 46.05019248 | 51.50703534 | 1.122022743  | 5.536120947 | 5.151924362 |
| <b>B7LFB6</b>  | TY-2482_chromosome | - | 5228813 | 5230138 | 75.36220138 | 91.51930784 | 86.12124153 | 79.90879735 | 85.25666353 | 104.8898009 | -0.117796372 | 0.202515917 | 0.164442542 |
| <b>A1A9R2</b>  | TY-2482_chromosome | - | 5230162 | 5230734 | 47.60976747 | 35.27080919 | 29.40345521 | 55.9099786  | 45.12395527 | 52.0691955  | -0.444514952 | 1.024519127 | 0.88631439  |
| <b>B7LFB8</b>  | TY-2482_chromosome | - | 5230667 | 5231254 | 50.3079708  | 38.06844524 | 21.26735639 | 29.93160698 | 48.36571447 | 41.56437368 | -0.162862857 | 0.173150022 | 0.139719044 |
| <b>B7LFB9</b>  | TY-2482_chromosome | - | 5231267 | 5232064 | 23.24003194 | 36.49286104 | 23.32421504 | 30.839009   | 26.44707257 | 40.5438914  | -0.347178819 | 0.320089113 | 0.264476867 |
| <b>D3QPK4</b>  | TY-2482_chromosome | - | 5232473 | 5233204 | 22.86366781 | 55.9277072  | 45.55454299 | 16.86432504 | 19.98604383 | 25.07101946 | 0.894474028  | 2.537981422 | 2.289493692 |
| <b>B7LFC2</b>  | TY-2482_chromosome | - | 5233165 | 5234310 | 16.25326539 | 13.60512961 | 17.12977615 | 13.01073116 | 20.55478741 | 20.65506646 | -0.159783151 | 0.181358085 | 0.146690217 |
| <b>B7LFC3</b>  | TY-2482_chromosome | + | 5234541 | 5235176 | 618.2252533 | 677.5471071 | 713.7568491 | 591.3792194 | 566.6305877 | 598.1281942 | 0.195087795  | 1.086880959 | 0.943821787 |
| <b>B7LFC4</b>  | TY-2482_chromosome | - | 5235222 | 5239181 | 7816.275118 | 7325.433178 | 8171.88804  | 7719.977494 | 7146.555156 | 5890.54529  | 0.186141485  | 0.222827124 | 0.181799677 |
| <b>B7LFC5</b>  | TY-2482_chromosome | + | 5239604 | 5241109 | 1500.00066  | 1445.049975 | 1412.482688 | 975.4748583 | 959.3103299 | 729.4937917 | 0.699603967  | 9.610816013 | 9.115574323 |
| <b>D8EB88</b>  | TY-2482_chromosome | - | 5241301 | 5241618 | 86.12565217 | 88.0765239  | 82.06935927 | 44.73504559 | 55.69989396 | 55.5175597  | 0.704341353  | 3.092938916 | 2.816761503 |
| <b>B7LFC6</b>  | TY-2482_chromosome | + | 5241645 | 5242481 | 168.8688209 | 175.1114389 | 148.4217356 | 39.51163306 | 50.82459922 | 37.17087089 | 1.909185719  | 23.27622124 | 22.58269782 |
| <b>B7LFC7</b>  | TY-2482_chromosome | + | 5242542 | 5243666 | 880.7291691 | 887.0316314 | 786.3053699 | 88.04666106 | 105.9255749 | 74.12963717 | 3.220770049  | 124.3824332 | 123.0246027 |
| <b>B7LFC8</b>  | TY-2482_chromosome | + | 5243675 | 5244943 | 1222.636018 | 1448.8529   | 1175.693806 | 122.6738994 | 126.671873  | 105.7267037 | 3.369425457  | 157.0670501 | 155.5646752 |
| <b>E6ANA4</b>  | TY-2482_chromosome | - | 5244867 | 5245210 | 386.6372509 | 392.3812213 | 343.7969219 | 35.09675507 | 45.69750781 | 44.92692382 | 3.135062671  | 80.04695161 | 78.90618423 |
| <b>B7LFD0</b>  | TY-2482_chromosome | + | 5245430 | 5246350 | 286.3721315 | 290.4280687 | 315.8235036 | 675.7583323 | 663.8538105 | 515.4974919 | -1.050757608 | 14.16335846 | 13.58729976 |
| <b>B7LFD1</b>  | TY-2482_chromosome | - | 5246406 | 5246816 | 48.58459303 | 55.7344845  | 37.9682895  | 39.09298679 | 43.2780062  | 56.69021753 | -0.034772315 | 0.01598031  | 0.012486369 |
| <b>B7LFD2</b>  | TY-2482_chromosome | - | 5246821 | 5248143 | 55.30951077 | 48.43177785 | 60.06776121 | 45.23677585 | 38.43572447 | 46.78740692 | 0.373170193  | 0.786891876 | 0.671816073 |
| <b>B7LFD3</b>  | TY-2482_chromosome | - | 5248139 | 5250154 | 70.06915888 | 72.38062199 | 73.23155106 | 70.47232324 | 93.76780613 | 87.65688731 | -0.22199     | 0.536658731 | 0.449044318 |
| <b>B7LFD4</b>  | TY-2482_chromosome | - | 5250166 | 5252586 | 172.5204445 | 178.0632199 | 182.3769482 | 218.8530213 | 245.5868014 | 253.9888618 | -0.426029219 | 2.323450571 | 2.088919716 |
| <b>B5YU69</b>  | TY-2482_chromosome | + | 5253101 | 5254528 | 158.2494134 | 194.887361  | 169.6564151 | 209.2672016 | 218.2744784 | 311.4274277 | -0.534780974 | 2.402956823 | 2.162715439 |
| <b>B7LA99</b>  | TY-2482_chromosome | - | 5254575 | 5255438 | 141.9088586 | 172.7186974 | 148.1588996 | 1044.04702  | 1036.608565 | 1123.158691 | -2.839566359 | 95.11361277 | 93.89821177 |
| <b>B7LFE0</b>  | TY-2482_chromosome | - | 5255438 | 5255743 | 50.62447953 | 20.80837181 | 37.47304395 | 378.7184924 | 361.0136861 | 381.2763397 | -3.213079526 | 58.40827378 | 57.40896921 |
| <b>B7LFE2</b>  | TY-2482_chromosome | + | 5256325 | 5257308 | 13.45902446 | 13.58452421 | 19.66919422 | 35.05060941 | 34.68079361 | 26.94635898 | -1.008218733 | 2.462398353 | 2.218968637 |
| <b>C8UMN7</b>  | TY-2482_chromosome | + | 5257678 | 5258892 | 414.6986891 | 462.7722211 | 404.0083547 | 0           | 0           | 0           | 12.79614161  | 157.0033635 | 155.5037461 |
| <b>B7UP05</b>  | TY-2482_chromosome | - | 5259068 | 5260594 | 523.3682686 | 532.5257172 | 505.9009409 | 0           | 0           | 0           | 13.10869233  | 192.092831  | 190.4627423 |
| <b>B1LKM5</b>  | TY-2482_chromosome | + | 5260954 | 5262786 | 1637.417207 | 1983.641787 | 1777.330327 | 0           | 0           | 0           | 14.86526794  | 325.0237216 | 323.0330172 |
| <b>C8UMP3</b>  | TY-2482_chromosome | + | 5264843 | 5267200 | 1122.1201   | 1265.103901 | 1277.05254  | 0           | 0           | 0           | 14.33926475  | 325.0237216 | 323.0330172 |
| <b>B7MQ88</b>  | TY-2482_chromosome | - | 5267224 | 5267460 | 276.3341317 | 310.9406523 | 243.3835254 | 0           | 0           | 0           | 12.14948856  | 108.5828286 | 107.3143063 |
| <b>D3GX28</b>  | TY-2482_chromosome | - | 5267479 | 5268912 | 702.5414257 | 770.327492  | 742.7921571 | 64.61696636 | 61.39609457 | 66.90723099 | 3.50310842   | 146.6758047 | 145.2255034 |
| <b>E5ZNV7</b>  | TY-2482_chromosome | - | 5268912 | 5269130 | 110.1051863 | 172.5732081 | 133.7398284 | 0           | 0           | 0           | 11.11292294  | 57.91965202 | 56.92380798 |
| <b>C8UMT3</b>  | TY-2482_chromosome | - | 5270141 | 5270362 | 164.0559058 | 178.7747753 | 141.3499446 | 142.4706338 | 125.6072742 | 154.7417737 | 0.145663186  | 0.527403768 | 0.441064816 |
| <b>B7L BX4</b> | TY-2482_chromosome | - | 5270599 | 5272686 | 433.4392439 | 410.3270916 | 359.7103078 | 382.9065125 | 360.696731  | 358.4452714 | 0.107201885  | 0.478298013 | 0.398280781 |
| <b>Q5I3M9</b>  | TY-2482_chromosome | + | 5273660 | 5274354 | 14.47848877 | 12.45855303 | 13.01415708 | 42.95065134 | 50.52699497 | 79.66762636 | -2.080939421 | 8.731257044 | 8.257256481 |
| <b>C6UQF6</b>  | TY-2482_chromosome | + | 5274991 | 5275324 | 13.24825457 | 18.49831176 | 13.12030018 | 30.08659083 | 46.6869031  | 38.64729759 | -1.442660891 | 3.926393672 | 3.612293234 |
| <b>B7N312</b>  | TY-2482_chromosome | + | 5276307 | 5277093 | 296.2549111 | 374.4293239 | 279.2874515 | 0           | 0           | 0           | 12.3177585   | 114.991812  | 113.6932112 |
| <b>C8UMU1</b>  | TY-2482_chromosome | + | 5277222 | 5277413 | 102.7423027 | 122.8930626 | 102.2687506 | 0           | 0           | 0           | 10.81523601  | 51.74227395 | 50.78907417 |
| <b>Q8VR34</b>  | TY-2482_chromosome | - | 5277374 | 5277833 | 115.940671  | 152.8419498 | 115.3387558 | 0           | 0.498565811 | 0           | 9.237366474  | 56.86959711 | 55.88899303 |
| <b>Q712Q2</b>  | TY-2482_chromosome | + | 5278409 | 5278900 | 228.1560466 | 163.1350661 | 194.0595007 | 0           | 0           | 0           | 11.76815555  | 82.94007883 | 81.77455863 |