

**Table S1 Genotyped single nucleotide polymorphisms (SNPs).** The single nucleotide polymorphisms (SNPs) used for association analyses in Norwegian Duroc pigs. Their NCBI rs#, positions (pos) on *Sus scrofa10.2*, functional classes (class) and their effect, amino acid change (aa), genotyped minor allele frequency (MAF) values, percentage of explained variance, and log likelihood test (LRT) scores for androstenone (andr), testosterone (test), estrone sulphate (esul) and 17 $\beta$ -estradiol (estr) are given. An additional 21 SNPs from the Illumina 60K BeadChip were also included.

| name        | pos          | andr  | test | est   | esul | MAF   | variance | class      | effect         | aa   | SIFT                  | Human associated gene name | effect | aa | gene name |
|-------------|--------------|-------|------|-------|------|-------|----------|------------|----------------|------|-----------------------|----------------------------|--------|----|-----------|
| rs322286479 | 2264<br>7977 | 17.72 | 0    | 0.025 | 0    | 0.232 | 4.5      | Exon       | Non-synonymous | R->W | 0.04<br>(deleterious) | <i>RDH5</i>                |        |    |           |
| rs81383167  | 2264<br>8197 | 15.85 | 0    | 0.05  | 0    | 0.239 | 4        | Exon       | synonymous     |      |                       | <i>RDH5</i>                |        |    |           |
| rs344627572 | 2264<br>8284 | 18.10 | 0    | 0.025 | 0    | 0.233 | 4.5      | Exon       | synonymous     |      |                       | <i>RDH5</i>                |        |    |           |
| rs328425498 | 2264<br>8880 | 16.76 | 0    | 0.01  | 0    | 0.229 | 4.3      | Intron     |                |      |                       | <i>RDH5</i>                |        |    |           |
| rs332798273 | 2264<br>9311 | 15.49 | 0    | 0.05  | 0    | 0.233 | 4        | Intron     |                |      |                       | <i>RDH5</i>                |        |    |           |
| rs344314973 | 2265<br>1512 | 18.10 | 0    | 0.025 | 0    | 0.227 | 4.5      | Intergenic |                |      |                       |                            |        |    |           |
| rs345943585 | 2265<br>2372 | 9.69  | 0    | 0.01  | 0    | 0.324 | 2.7      | Intron     |                |      |                       | <i>CD63</i>                |        |    |           |
| rs327655707 | 2267<br>3393 | 17.72 | 0    | 0.025 | 0    | 0.227 | 4.5      | Intron     |                |      |                       | <i>GDF11</i>               |        |    |           |
| rs341310849 | 2268<br>9760 | 3.09  | 0    | 0     | 0    | 0.469 | 1.2      | Intron     |                |      |                       | <i>SARNP</i>               |        |    |           |
| rs320775034 | 2270<br>2968 | 2.56  | 0    | 0     | 0    | 0.477 | 1.1      | Intron     |                |      |                       | <i>SARNP</i>               |        |    |           |
| rs325280874 | 2271<br>9094 | 0.68  | 0    | 0     | 0    | 0.228 | 0.8      | Intron     |                |      |                       | <i>SARNP</i>               |        |    |           |
| rs336011621 | 2274<br>1064 | 15.95 | 0    | 0.044 | 0    | 0.233 | 4.1      | Intergenic |                |      |                       |                            |        |    |           |
| rs320179428 | 2274<br>1496 | 17.72 | 0    | 0.043 | 0    | 0.230 | 4.5      | Intergenic |                |      |                       |                            |        |    |           |
| rs332386261 | 2275<br>2173 | 2.79  | 0    | 0     | 0    | 0.477 | 1.2      | Exon       | synonymous     |      |                       | <i>DNAJC14</i>             |        |    |           |
| rs339574266 | 2275<br>3153 | 15.95 | 0    | 0.044 | 0    | 0.234 | 4.1      | Intron     |                |      |                       | <i>DNAJC14</i>             |        |    |           |
| rs319482986 | 2276<br>1452 | 0.53  | 0    | 0     | 0    | 0.239 | 0.8      | Exon       | synonymous     |      |                       | <i>MMP19</i>               |        |    |           |
| rs331600246 | 2276<br>2241 | 15.95 | 0    | 0.044 | 0    | 0.234 | 4.1      | Exon       | synonymous     |      |                       | <i>MMP19</i>               |        |    |           |
| rs341730558 | 2276<br>2778 | 15.95 | 0    | 0.044 | 0    | 0.231 | 4.1      | Exon       | synonymous     |      |                       | <i>MMP19</i>               |        |    |           |
| rs322122863 | 2276<br>5885 | 15.95 | 0    | 0.044 | 0    | 0.229 | 4.1      | Exon       | Non-synonymous | G->R | 0.18<br>(tolerat)     | <i>MMP19</i>               |        |    |           |

|                 |              |       |   |       |      |       |     |            | ous            |  | ed low<br>confid<br>ence) |  |             |  |  |
|-----------------|--------------|-------|---|-------|------|-------|-----|------------|----------------|--|---------------------------|--|-------------|--|--|
| rs324745822     | 2276<br>6002 | 15.95 | 0 | 0.044 | 0    | 0.234 | 4.1 | Intergenic |                |  |                           |  |             |  |  |
| ASGA002507<br>0 | 2277<br>3375 | 17.05 | 0 | 0.026 | 0    | 0.236 | 4.5 | Intergenic |                |  |                           |  |             |  |  |
| rs330073140     | 2278<br>9156 | 16.11 | 0 | 0.105 | 0    | 0.142 | 4.8 | Exon       | 3'UTR          |  |                           |  | <i>PYM1</i> |  |  |
| rs340076148     | 2278<br>9517 | 16.35 | 0 | 0.026 | 0    | 0.234 | 4.1 | Exon       | 3'UTR          |  |                           |  | <i>PYM1</i> |  |  |
| rs80988884      | 2278<br>9895 | 16.35 | 0 | 0.026 | 0    | 0.232 | 4.1 | Exon       | 3'UTR          |  |                           |  | <i>PYM1</i> |  |  |
| rs332699091     | 2281<br>0938 | 16.35 | 0 | 0.034 | 0    | 0.234 | 4.1 | Intergenic |                |  |                           |  |             |  |  |
| rs345932972     | 2281<br>1022 | 16.35 | 0 | 0.034 | 0    | 0.235 | 4.1 | Intergenic |                |  |                           |  |             |  |  |
| rs324231280     | 2281<br>1366 | 16.35 | 0 | 0.034 | 0    | 0.237 | 4.1 | Intergenic |                |  |                           |  |             |  |  |
| rs335090885     | 2281<br>1711 | 16.35 | 0 | 0.034 | 0    | 0.235 | 4.1 | Exon       | 5'UTR          |  |                           |  | <i>DGKA</i> |  |  |
| rs343055488     | 2281<br>7593 | 16.35 | 0 | 0.026 | 0    | 0.235 | 4.1 | Exon       | 5'UTR          |  |                           |  | <i>DGKA</i> |  |  |
| rs325193603     | 2282<br>2401 | 16.35 | 0 | 0.034 | 0    | 0.234 | 4.1 | Exon       | synonym<br>ous |  |                           |  | <i>DGKA</i> |  |  |
| rs336413988     | 2283<br>4572 | 1.73  | 0 | 0     | 0.05 | 0.281 | 1   | Exon       | synonym<br>ous |  |                           |  | <i>DGKA</i> |  |  |
| rs343221661     | 2283<br>7681 | 17.57 | 0 | 0.026 | 0    | 0.173 | 4.4 | Intron     |                |  |                           |  | <i>PMEL</i> |  |  |
| rs328542564     | 2288<br>9780 | 2.18  | 0 | 0     | 0    | 0.481 | 1   | Intron     |                |  |                           |  | <i>PMEL</i> |  |  |
| rs80977300      | 2290<br>0786 | 18.82 | 0 | 0.069 | 0    | 0.264 | 4.3 | Intergenic |                |  |                           |  |             |  |  |
| rs80907514      | 2290<br>1225 | 3.73  | 0 | 0     | 0    | 0.451 | 1.3 | Intergenic |                |  |                           |  |             |  |  |
| rs332584935     | 2291<br>2241 | 15.99 | 0 | 0.055 | 0    | 0.233 | 4.1 | Intergenic |                |  |                           |  |             |  |  |
| rs342705026     | 2291<br>8137 | 0.68  | 0 | 0     | 0    | 0.235 | 0.8 | Intergenic |                |  |                           |  |             |  |  |
| INRA0018914     | 2292<br>1968 | 17.05 | 0 | 0     | 0    | 0.236 | 4.5 | Intergenic |                |  |                           |  |             |  |  |
| rs328001776     | 2292<br>2973 | 2.32  | 0 | 0     | 0    | 0.475 | 1   | Intergenic |                |  |                           |  |             |  |  |
| rs196952176     | 2293<br>6766 | 16.35 | 0 | 0.055 | 0    | 0.234 | 4.1 | Intergenic |                |  |                           |  |             |  |  |
| rs331501814     | 2294<br>0917 | 16.93 | 0 | 0.034 | 0    | 0.230 | 4.3 | Intergenic |                |  |                           |  |             |  |  |
| DIAS0004735     | 2294<br>1207 | 2.35  | 0 | 0     | 0    | 0.481 | 1.1 | Exon       | 5'UTR          |  |                           |  | <i>CDK2</i> |  |  |
| rs318649076     | 2294<br>7123 | 15.81 | 0 | 0.072 | 0    | 0.290 | 4   | Intergenic |                |  |                           |  |             |  |  |

|                 |              |       |   |       |      |       |     |            |                |      |                     |  |                       |        |              |
|-----------------|--------------|-------|---|-------|------|-------|-----|------------|----------------|------|---------------------|--|-----------------------|--------|--------------|
| rs343410732     | 2294<br>8108 | 16.35 | 0 | 0.034 | 0    | 0.232 | 4.1 | Intergenic |                |      |                     |  |                       |        |              |
| rs327274312     | 2295<br>1109 | 16.35 | 0 | 0.055 | 0    | 0.232 | 4.1 | Intergenic |                |      |                     |  |                       |        |              |
| ASGA002507<br>2 | 2296<br>9678 | 20.34 | 0 | 0     | 0    | 0.26  | 4.5 | Intron     |                |      |                     |  | <i>ERBB3</i>          |        |              |
| rs329904578     | 2297<br>0594 | 18.82 | 0 | 0.069 | 0    | 0.259 | 4.3 | Exon       | 5'UTR          |      |                     |  | <i>ERBB3</i>          |        |              |
| rs340905360     | 2298<br>0503 | 13.35 | 0 | 0     | 0    | 0.308 | 3.2 | Intron     |                |      |                     |  | <i>ERBB3</i>          |        |              |
| rs324795185     | 2299<br>1309 | 6.08  | 0 | 0     | 0    | 0.496 | 1.7 | Intron     |                |      |                     |  | <i>ESYT1, ERBB3</i>   |        |              |
| rs329190983     | 2299<br>2320 | 1.57  | 0 | 0     | 0.04 | 0.286 | 1   | Exon       | Non-synonymous | I->V | 0.27<br>(tolerated) |  | <i>ESYT1</i>          | Intron | <i>ERBB3</i> |
| rs337128796     | 2300<br>5094 | 1.55  | 0 | 0     | 0.03 | 0.286 | 1   | Exon       | 3'UTR          |      |                     |  | <i>ESYT1</i>          | Intron | <i>ERBB3</i> |
| rs343175926     | 2302<br>9661 | 0.69  | 0 | 0     | 0    | 0.181 | 0.8 | Intron     |                |      |                     |  | <i>ERBB3</i>          |        |              |
| DIAS0001551     | 2303<br>2447 | 21.34 | 0 | 0     | 0    | 0.259 | 5.1 | Intron     |                |      |                     |  | <i>SLC39A5, ERBB3</i> |        |              |
| rs324131906     | 2303<br>2919 | 0.69  | 0 | 0     | 0    | 0.239 | 0.8 | Exon       | synonymous     |      |                     |  | <i>SLC39A5</i>        | Intron | <i>ERBB3</i> |
| rs335374076     | 2303<br>5955 | 15.21 | 0 | 0     | 0    | 0.302 | 3.5 | Intron     |                |      |                     |  | <i>SLC39A5, ERBB3</i> |        |              |
| rs342097882     | 2304<br>2148 | 21.13 | 0 | 0.057 | 0    | 0.257 | 4.8 | Intron     |                |      |                     |  | <i>NABP2, ERBB3</i>   |        |              |
| rs323397522     | 2304<br>3192 | 21.13 | 0 | 0.057 | 0    | 0.253 | 4.8 | Exon       | 5'UTR          |      |                     |  | <i>NABP2</i>          | Intron | <i>ERBB3</i> |
| rs334387135     | 2304<br>8314 | 4.29  | 0 | 0     | 0    | 0.452 | 1.4 | Intron     |                |      |                     |  | <i>RNF41, ERBB3</i>   |        |              |
| rs344556303     | 2305<br>8166 | 21.13 | 0 | 0.081 | 0    | 0.255 | 4.8 | Intron     |                |      |                     |  | <i>RNF41, ERBB3</i>   |        |              |
| ASGA002507<br>7 | 2306<br>1869 | 21.13 | 0 | 0.05  | 0    | 0.259 | 4.8 | Intron     |                |      |                     |  | <i>RNF41, ERBB3</i>   |        |              |
| ASGA002507<br>5 | 2307<br>9108 | 21.34 | 0 | 0     | 0    | 0.259 | 5.1 | Intron     |                |      |                     |  | <i>ERBB3</i>          |        |              |
| rs336528437     | 2308<br>7901 | 19.36 | 0 | 0.069 | 0    | 0.258 | 4.4 | Exon       | synonymous     |      |                     |  | <i>ERBB3</i>          |        |              |
| rs343826346     | 2312<br>0443 | 0.55  | 0 | 0     | 0    | 0.228 | 0.8 | Intergenic |                |      |                     |  |                       |        |              |
| rs327175412     | 2315<br>7363 | 4.36  | 0 | 0     | 0    | 0.460 | 1.5 | Intron     |                |      |                     |  | <i>COQ10A</i>         |        |              |
| rs338250781     | 2317<br>2774 | 21.55 | 0 | 0.057 | 0    | 0.254 | 4.9 | Intergenic |                |      |                     |  |                       |        |              |
| rs318527203     | 2318<br>5783 | 22.11 | 0 | 0.057 | 0    | 0.207 | 5   | Intergenic |                |      |                     |  |                       |        |              |
| ASGA002508<br>0 | 2319<br>0382 | 13.76 | 0 | 0     | 0    | 0.308 | 3.4 | Intergenic |                |      |                     |  |                       |        |              |
| rs321671602     | 2320<br>9605 | 0.58  | 0 | 0.056 | 0.02 | 0.194 | 0.8 | Intergenic |                |      |                     |  |                       |        |              |

|                 |              |       |   |       |   |       |     |            |  |  |  |  |          |  |
|-----------------|--------------|-------|---|-------|---|-------|-----|------------|--|--|--|--|----------|--|
| rs329932356     | 2324<br>6551 | 0.69  | 0 | 0     | 0 | 0.252 | 0.8 | Intergenic |  |  |  |  |          |  |
| rs80791879      | 2328<br>0756 | 21.13 | 0 | 0.081 | 0 | 0.254 | 4.8 | Exon       | synonym<br>ous                                 |  |  |  | STAT2    |  |
| rs321408460     | 2328<br>3519 | 21.13 | 0 | 0.081 | 0 | 0.257 | 4.8 | Intron     |  |  |  |  | STAT2    |  |
| rs329107615     | 2328<br>9034 | 21.13 | 0 | 0.081 | 0 | 0.256 | 4.8 | Intron     |  |  |  |  | STAT2    |  |
| CADI0000251     | 2329<br>1033 | 21.13 | 0 | 0.081 | 0 | 0.259 | 4.8 | Exon       | synonym<br>ous                                 |  |  |  | STAT2    |  |
| rs320695607     | 2329<br>6665 | 21.13 | 0 | 0.081 | 0 | 0.259 | 4.8 | Exon       | synonym<br>ous,<br>splice<br>region<br>variant |  |  |  | APOF     |  |
| rs326008779     | 2330<br>8417 | 15.18 | 0 | 0     | 0 | 0.303 | 3.5 | Exon       | 3'UTR  |  |  |  | TIMELESS |  |
| H3GA001606<br>9 | 2331<br>3949 | 21.34 | 0 | 0     | 0 | 0.259 | 5.1 | Intron     |  |  |  |  | TIMELESS |  |
| rs331819690     | 2333<br>2075 | 21.13 | 0 | 0.081 | 0 | 0.253 | 4.8 | Intron     |  |  |  |  | TIMELESS |  |
| rs337190351     | 2333<br>3637 | 21.76 | 0 | 0.037 | 0 | 0.253 | 5   | Intergenic |  |  |  |  |          |  |
| rs45434332      | 2333<br>7793 | 21.13 | 0 | 0.037 | 0 | 0.256 | 4.8 | Intron     |  |  |  |  | MIP      |  |
| rs323351980     | 2350<br>1205 | 21.81 | 0 | 0.037 | 0 | 0.252 | 5   | Intron     |  |  |  |  | RBMS2    |  |
| rs334598159     | 2350<br>1329 | 21.81 | 0 | 0.037 | 0 | 0.257 | 5   | Intron     |  |  |  |  | RBMS2    |  |
| rs342746614     | 2350<br>6458 | 21.81 | 0 | 0.037 | 0 | 0.216 | 5   | Intron     |  |  |  |  | RBMS2    |  |
| rs324720234     | 2352<br>7868 | 18.15 | 0 | 0     | 0 | 0.335 | 3.8 | Intergenic |  |  |  |  |          |  |
| rs319134420     | 2360<br>5918 | 21.13 | 0 | 0.037 | 0 | 0.256 | 4.8 | Intergenic |  |  |  |  |          |  |
| rs333119909     | 2361<br>1111 | 21.13 | 0 | 0.037 | 0 | 0.251 | 4.8 | Exon       | 3'UTR  |  |  |  | BAZ2A    |  |
| rs45433675      | 2363<br>3645 | 21.13 | 0 | 0.037 | 0 | 0.250 | 4.8 | Intron     |  |  |  |  | BAZ2A    |  |
| rs330431342     | 2363<br>8649 | 21.13 | 0 | 0.037 | 0 | 0.253 | 4.8 | Intergenic |  |  |  |  |          |  |
| rs344431581     | 2364<br>3924 | 21.13 | 0 | 0.037 | 0 | 0.255 | 4.8 | Intergenic |  |  |  |  |          |  |
| ASGA002508<br>3 | 2364<br>6360 | 25.75 | 0 | 0     | 0 | 0.284 | 5.4 | Intergenic |  |  |  |  |          |  |
| rs329732704     | 2365<br>2473 | 23.88 | 0 | 0     | 0 | 0.342 | 4.9 | Intergenic |  |  |  |  |          |  |
| rs55619179      | 2366<br>1024 | 21.13 | 0 | 0.035 | 0 | 0.235 | 4.8 | Exon       | synonym<br>ous                                 |  |  |  | ATP5B    |  |
| ALGA0031261     | 2366<br>2089 | 21.13 | 0 | 0.035 | 0 | 0.262 | 4.8 | Intron     |  |  |  |  | ATP5B    |  |

|                 |              |       |   |       |      |       |     |            |                |  |  |  |                                |                |  |              |
|-----------------|--------------|-------|---|-------|------|-------|-----|------------|----------------|--|--|--|--------------------------------|----------------|--|--------------|
| rs342473564     | 2366<br>4170 | 21.13 | 0 | 0.035 | 0    | 0.254 | 4.8 | Intron     |                |  |  |  | <i>ATP5B</i>                   |                |  |              |
| rs339814725     | 2366<br>8458 | 22.10 | 0 | 0.019 | 0    | 0.217 | 5   | Intergenic |                |  |  |  |                                |                |  |              |
| ALGA0031262     | 2368<br>6043 | 0     | 0 | 0     | 0    | 0.027 | 0   | Intron     |                |  |  |  | <i>PTGES3</i>                  |                |  |              |
| rs326378603     | 2368<br>8504 | 21.13 | 0 | 0.121 | 0    | 0.257 | 4.8 | Intron     |                |  |  |  | <i>PTGES3</i>                  |                |  |              |
| rs340409229     | 2369<br>5114 | 21.90 | 0 | 0.091 | 0    | 0.261 | 5   | Intron     |                |  |  |  | <i>PTGES3</i>                  |                |  |              |
| rs324616431     | 2369<br>6268 | 21.55 | 0 | 0.121 | 0    | 0.246 | 4.9 | Intergenic |                |  |  |  |                                |                |  |              |
| rs332357200     | 2370<br>8594 | 21.13 | 0 | 0.121 | 0    | 0.257 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| H3GA001607<br>4 | 2373<br>7420 | 21.34 | 0 | 0     | 0    | 0.259 | 5.1 | Intergenic |                |  |  |  |                                |                |  |              |
| rs339985284     | 2375<br>5770 | 21.13 | 0 | 0.121 | 0    | 0.253 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs324163538     | 2376<br>0884 | 21.13 | 0 | 0.121 | 0    | 0.250 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs336052059     | 2376<br>7272 | 21.55 | 0 | 0.091 | 0    | 0.252 | 4.9 | Intergenic |                |  |  |  |                                |                |  |              |
| rs321363767     | 2377<br>7965 | 21.13 | 0 | 0.121 | 0    | 0.256 | 4.8 | Intron     |                |  |  |  | <i>HSD17B6</i>                 |                |  |              |
| rs325608908     | 2378<br>3769 | 21.13 | 0 | 0.121 | 0    | 0.256 | 4.8 | Intron     |                |  |  |  | <i>HSD17B6</i>                 |                |  |              |
| rs339244595     | 2378<br>5359 | 21.13 | 0 | 0.121 | 0    | 0.254 | 4.8 | Exon       | synonym<br>ous |  |  |  | <i>HSD17B6</i>                 |                |  |              |
| rs196952037     | 2378<br>5512 | 21.13 | 0 | 0.121 | 0    | 0.256 | 4.8 | Exon       | synonym<br>ous |  |  |  | <i>HSD17B6</i>                 |                |  |              |
| rs331914905     | 2379<br>1879 | 21.13 | 0 | 0.121 | 0    | 0.254 | 4.8 | Intron     |                |  |  |  | <i>HSD17B6</i>                 |                |  |              |
| rs343315339     | 2379<br>8333 | 21.13 | 0 | 0.121 | 0    | 0.264 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs327169901     | 2379<br>8441 | 21.13 | 0 | 0.121 | 0    | 0.252 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs338629716     | 2383<br>7331 | 21.13 | 0 | 0.121 | 0    | 0.258 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs319779066     | 2383<br>8469 | 21.76 | 0 | 0.035 | 0    | 0.251 | 5   | Intergenic |                |  |  |  |                                |                |  |              |
| rs331055272     | 2383<br>9270 | 21.29 | 0 | 0.102 | 0    | 0.245 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs334482774     | 2389<br>4026 | 21.13 | 0 | 0.121 | 0    | 0.248 | 4.8 | Intergenic |                |  |  |  |                                |                |  |              |
| rs344727562     | 2395<br>4716 | 0.014 | 0 | 0.083 | 0.36 | 0.225 | 0   | Intergenic |                |  |  |  |                                |                |  |              |
| rs80913640      | 2396<br>5462 | 21.28 | 0 | 0.037 | 0    | 0.258 | 4.8 | Exon       | synonym<br>ous |  |  |  | <i>ENSSSCG0000002<br/>6524</i> | synonymo<br>us |  | <i>STAT6</i> |
| rs322701353     | 2397<br>7771 | 21.69 | 0 | 0.022 | 0    | 0.255 | 4.9 | Exon       | synonym<br>ous |  |  |  | <i>ENSSSCG0000000<br/>0411</i> |                |  |              |

|                 |              |       |   |       |      |       |     |            |  |      |                           |                        |                        |              |                        |
|-----------------|--------------|-------|---|-------|------|-------|-----|------------|--|------|---------------------------|------------------------|------------------------|--------------|------------------------|
| rs334696417     | 2397<br>8441 | 21.28 | 0 | 0.037 | 0    | 0.259 | 4.8 | Intron     |  |      |                           | ENSSSCG0000000<br>0411 |                        |              |                        |
| rs340206243     | 2397<br>8565 | 21.28 | 0 | 0.037 | 0    | 0.258 | 4.8 | Intron     |  |      |                           | ENSSSCG0000000<br>0411 |                        |              |                        |
| rs323573852     | 2398<br>8945 | 21.28 | 0 | 0.037 | 0    | 0.224 | 4.8 | Intergenic |  |      |                           |                        |                        |              |                        |
| rs334799915     | 2398<br>9714 | 8.92  | 0 | 0     | 0    | 0.488 | 2.2 | Intergenic |  |      |                           |                        |                        |              |                        |
| ASGA002509<br>2 | 2399<br>4070 | 21.49 | 0 | 0     | 0    | 0.265 | 5   | Intron     |  |      |                           | ENSSSCG0000002<br>6378 | Intron                 |              | ENSSSCG0000002<br>5542 |
| rs341449423     | 2400<br>0917 | 20.32 | 0 | 0.037 | 0    | 0.257 | 4.6 | Exon       | synonym<br>ous                                 |      |                           | ENSSSCG0000002<br>6378 | synonymo<br>us         |              | ENSSSCG0000002<br>5542 |
| rs326279394     | 2400<br>4105 | 8.22  | 0 | 0     | 0    | 0.489 | 2.1 | Exon       | Non-<br>synonym<br>ous                         | T->M | 0.26<br>(tolerat<br>ed)   | ENSSSCG0000002<br>6378 | Non-<br>synonymo<br>us | T-<br>><br>M | ENSSSCG0000002<br>5542 |
| rs334619554     | 2400<br>6898 | 21.48 | 0 | 0.029 | 0    | 0.265 | 5   | Exon       | Non-<br>synonym<br>ous                         | A->S | 0.01<br>(delete<br>rious) | ENSSSCG0000002<br>6378 | Non-<br>synonymo<br>us | A-<br>><br>S | ENSSSCG0000002<br>5542 |
| rs325932073     | 2401<br>0913 | 7.27  | 0 | 0     | 0.07 | 0.462 | 1.9 | Intergenic |  |      |                           |                        |                        |              |                        |
| rs346272984     | 2402<br>0029 | 21.69 | 0 | 0.037 | 0    | 0.255 | 4.9 | Intergenic |  |      |                           |                        |                        |              |                        |
| rs325511177     | 2402<br>0038 | 0     | 0 | 0.168 | 0.32 | 0.185 | 0   | Intergenic |  |      |                           |                        |                        |              |                        |
| rs339156317     | 2402<br>9234 | 23.16 | 0 | 0.084 | 0    | 0.265 | 5.1 | Intron     |  |      |                           | ENSSSCG0000000<br>0413 | Intron                 |              | ENSSSCG0000000<br>0424 |
| rs320473101     | 2404<br>0827 | 21.28 | 0 | 0.066 | 0    | 0.26  | 4.8 | Exon       | Non-<br>synonym<br>ous                         | I->V | 0.02<br>(delete<br>rious) | ENSSSCG0000000<br>0413 |                        |              |                        |
| DIAS0004585     | 2404<br>1995 | 21.28 | 0 | 0.037 | 0    | 0.262 | 4.8 | Exon       | synonym<br>ous,<br>splice<br>region<br>variant |      |                           | ENSSSCG0000000<br>0413 |                        |              |                        |
| rs81312698      | 2404<br>5687 | 1.086 | 0 | 0     | 0    | 0.255 | 0.9 | Intergenic |  |      |                           |                        |                        |              |                        |
| rs320916955     | 2404<br>7518 | 21.28 | 0 | 0.037 | 0    | 0.254 | 4.8 | Intergenic |  |      |                           |                        |                        |              |                        |
| rs336038669     | 2404<br>9288 | 21.28 | 0 | 0.037 | 0    | 0.257 | 4.8 | Exon       | Non-<br>synonym<br>ous                         | S->G | 1<br>(tolerat<br>ed)      | TAC3                   |                        |              |                        |
| rs319700230     | 2405<br>1985 | 21.28 | 0 | 0.037 | 0    | 0.259 | 4.8 | Exon       | Non-<br>synonym<br>ous                         | H->R | 1<br>(tolerat<br>ed)      | TAC3                   |                        |              |                        |
| rs331868502     | 2405<br>3743 | 21.28 | 0 | 0.037 | 0    | 0.261 | 4.8 | Exon       | Non-<br>synonym<br>ous                         | A->V | 0.53<br>(tolerat<br>ed)   | TAC3                   |                        |              |                        |
| rs328621205     | 2405<br>7597 | 22.24 | 0 | 0.015 | 0    | 0.223 | 5   | Intergenic |  |      |                           |                        |                        |              |                        |
| ASGA010365<br>0 | 2405<br>7900 | 21.34 | 0 | 0     | 0    | 0.262 | 5.1 | Intergenic |  |      |                           |                        |                        |              |                        |

|             |              |       |   |       |      |       |     |            |                        |      |                         |  |        |  |
|-------------|--------------|-------|---|-------|------|-------|-----|------------|------------------------|------|-------------------------|--|--------|--|
| rs339225409 | 2406<br>6320 | 21.55 | 0 | 0.057 | 0    | 0.257 | 4.9 | Intergenic |                        |      |                         |  |        |  |
| rs81475530  | 2406<br>7157 | 21.13 | 0 | 0.081 | 0    | 0.255 | 4.8 | Exon       | synonym<br>ous         |      |                         |  | ZBTB39 |  |
| rs196960371 | 2407<br>4908 | 21.13 | 0 | 0.081 | 0    | 0.257 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs341893949 | 2408<br>7159 | 21.13 | 0 | 0.081 | 0    | 0.263 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs323471701 | 2411<br>2111 | 21.13 | 0 | 0.121 | 0    | 0.256 | 4.8 | Intron     |                        |      |                         |  | SDR9C7 |  |
| rs331281514 | 2411<br>3102 | 22    | 0 | 0.121 | 0    | 0.255 | 5   | Intron     |                        |      |                         |  | SDR9C7 |  |
| rs338921529 | 2411<br>5262 | 22    | 0 | 0.05  | 0    | 0.256 | 5   | Intron     |                        |      |                         |  | SDR9C7 |  |
| rs322705134 | 2412<br>1188 | 21.68 | 0 | 0.03  | 0    | 0.259 | 4.9 | Intron     |                        |      |                         |  | SDR9C7 |  |
| rs334483880 | 2412<br>4376 | 21.76 | 0 | 0.081 | 0    | 0.254 | 5   | Intron     |                        |      |                         |  | SDR9C7 |  |
| rs346262620 | 2412<br>5051 | 21.13 | 0 | 0.081 | 0    | 0.256 | 4.8 | Exon       | Non-<br>synonym<br>ous | G->S | 1<br>(tolerat<br>ed)    |  | SDR9C7 |  |
| rs322041624 | 2412<br>5371 | 21.13 | 0 | 0.081 | 0    | 0.253 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs340912662 | 2412<br>5786 | 21.13 | 0 | 0.081 | 0    | 0.261 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs318348532 | 2412<br>6544 | 21.13 | 0 | 0.081 | 0    | 0.256 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs329647381 | 2412<br>7715 | 21.13 | 0 | 0.081 | 0    | 0.256 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs340590528 | 2412<br>9261 | 21.76 | 0 | 0.081 | 0    | 0.248 | 5   | Intergenic |                        |      |                         |  |        |  |
| rs320946775 | 2413<br>1309 | 21.13 | 0 | 0.081 | 0    | 0.260 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs333429894 | 2413<br>4363 | 21.13 | 0 | 0.081 | 0    | 0.258 | 4.8 | Intron     |                        |      |                         |  | RDH16  |  |
| rs343546896 | 2413<br>6112 | 21.48 | 0 | 0.081 | 0    | 0.254 | 4.9 | Exon       | Non-<br>synonym<br>ous | R->K | 0.15<br>(tolerat<br>ed) |  | RDH16  |  |
| rs328269823 | 2413<br>7957 | 21.13 | 0 | 0.081 | 0    | 0.310 | 4.8 | Intron     |                        |      |                         |  | RDH16  |  |
| rs335585083 | 2413<br>8240 | 21.76 | 0 | 0.19  | 0    | 0.258 | 5   | Intron     |                        |      |                         |  | RDH16  |  |
| rs329020205 | 2413<br>9064 | 21.28 | 0 | 0.084 | 0    | 0.259 | 4.8 | Intergenic |                        |      |                         |  |        |  |
| rs340508837 | 2413<br>9749 | 21.47 | 0 | 0.121 | 0    | 0.243 | 4.9 | Intergenic |                        |      |                         |  |        |  |
| rs324066652 | 2415<br>3921 | 0     | 0 | 0.337 | 0.61 | 0.230 | 0   | Intergenic |                        |      |                         |  |        |  |
| rs343644453 | 2420<br>8703 | 10.79 | 0 | 0     | 0    | 0.174 | 3.2 | Intron     |                        |      |                         |  | STAT6  |  |
| rs328095588 | 2421         | 21.69 | 0 | 0.022 | 0    | 0.258 | 4.9 | Exon       | synonym                |      |                         |  | STAT6  |  |

|                 |              |       |           |       |      |       |     |            |            |  |  |  |        |  |  |
|-----------------|--------------|-------|-----------|-------|------|-------|-----|------------|------------|--|--|--|--------|--|--|
|                 | 3673         |       |           |       |      |       |     |            | ous        |  |  |  |        |  |  |
| rs339194671     | 2421<br>4827 | 21.28 | 0         | 0.037 | 0    | 0.259 | 4.8 | Exon       | synonymous |  |  |  | STAT6  |  |  |
| rs318931955     | 2422<br>1240 | 11.53 | 0.17<br>x | 1.554 | 0.62 | 0.323 | 2.2 | Exon       | 3'UTR      |  |  |  | STAT6  |  |  |
| rs331063564     | 2422<br>1247 | 0     | 0.14      | 1.046 | 1.35 | 0.163 | 0   | Exon       | 3'UTR      |  |  |  | STAT6  |  |  |
| rs337948009     | 2427<br>1893 | 21.28 | 0         | 0.037 | 0    | 0.259 | 4.8 | Intron     |            |  |  |  | MYO1A  |  |  |
| ALGA0031268     | 2429<br>3790 | 1.312 | 0         | 0     | 0    | 0.101 | 2   | Intron     |            |  |  |  | LRP1   |  |  |
| ALGA0031274     | 2433<br>0746 | 0     | 0         | 0     | 0    | 0.159 | 0   | Intron     |            |  |  |  | LRP1   |  |  |
| ASGA002509<br>7 | 2435<br>4867 | 1.312 | 0         | 0     | 0    | 0.1   | 2   | Intergenic |            |  |  |  |        |  |  |
| rs321543967     | 2436<br>6112 | 0.402 | 0         | 0     | 0    | 0.209 | 0.7 | Intergenic |            |  |  |  |        |  |  |
| rs329517918     | 2438<br>3196 | 3.432 | 0         | 0     | 0    | 0.473 | 1.3 | Exon       | 3'UTR      |  |  |  | STAC3  |  |  |
| rs335963889     | 2439<br>0747 | 1.96  | 0         | 0     | 0    | 0.439 | 1   | Intergenic |            |  |  |  |        |  |  |
| rs338094154     | 2440<br>0567 | 4.16  | 0         | 0     | 0    | 0.385 | 1.5 | Intron     |            |  |  |  | R3HDM2 |  |  |
| rs339779477     | 2449<br>3471 | 4.458 | 0         | 0     | 0    | 0.388 | 1.6 | Intron     |            |  |  |  | R3HDM2 |  |  |
| rs323132897     | 2450<br>4464 | 18.52 | 0         | 0.003 | 0    | 0.256 | 4.3 | Intron     |            |  |  |  | R3HDM2 |  |  |
| rs322722625     | 2466<br>4102 | 4.598 | 0         | 0     | 0    | 0.387 | 1.6 | Intergenic |            |  |  |  |        |  |  |
| rs330474286     | 2470<br>9008 | 0     | 0         | 0     | 0    | 0.279 | 0   | Intron     |            |  |  |  |        |  |  |
| H3GA001609<br>0 | 2472<br>6597 | 18.70 | 0         | 0     | 0    | 0.345 | 4.3 | Intron     |            |  |  |  | MARS   |  |  |
| rs334122301     | 2477<br>6549 | 20.30 | 0         | 0.087 | 0    | 0.165 | 4.6 | Intron     |            |  |  |  | MARS   |  |  |
| rs81490455      | 2480<br>9910 | 0.258 | 0         | 0     | 0    | 0.073 | 0.9 | Intron     |            |  |  |  | DTX3   |  |  |
| rs333372477     | 2483<br>1917 | 16.47 | 0         | 0     | 0    | 0.328 | 3.4 | Intergenic |            |  |  |  |        |  |  |