

## Additional File 2.

Genome wide signatures of positive selection: The comparison of independent samples and the identification of regions associated to traits. BMC Genomics accepted October 2008. Barendse W, Harrison BE, Bunch RJ, Thomas MB, Turner LT.

SNP with extreme  $F_{ST}$  values in both the Bovine HapMap and Australian data sets.

| Locus                                  | Chromosome | Position  | $F_{ST}$ this study | $F_{ST}$ Bovine HapMap | 1 Mb blocks per chromosome |
|--|------------|-----------|---------------------|------------------------|----------------------------|
| <b>High <math>F_{ST}</math> values</b> |            |           |                     |                        |                            |
| rs29017243                             | Chr1       | 94552620  | 0.260               | 0.324                  |                            |
| rs29010367                             | Chr1       | 100797886 | 0.277               | 0.364                  |                            |
| rs29010368                             | Chr1       | 100797954 | 0.279               | 0.360                  |                            |
| rs29010370                             | Chr1       | 100797998 | 0.263               | 0.367                  |                            |
| rs29025998                             | Chr1       | 117239110 | 0.232               | 0.337                  | 3                          |
| rs29021613                             | Chr2       | 40579645  | 0.225               | 0.314                  |                            |
| rs29014403                             | Chr2       | 49761603  | 0.266               | 0.395                  |                            |
| rs29019351                             | Chr2       | 64740286  | 0.313               | 0.380                  |                            |
| rs29019352                             | Chr2       | 64740428  | 0.314               | 0.381                  |                            |
| rs29021800                             | Chr2       | 64792978  | 0.312               | 0.383                  |                            |
| rs29015270                             | Chr2       | 80019527  | 0.227               | 0.322                  |                            |
| rs29015267                             | Chr2       | 80019771  | 0.240               | 0.324                  | 4                          |
| rs29014816                             | Chr3       | 13934385  | 0.233               | 0.334                  |                            |
| rs29011277                             | Chr3       | 88185033  | 0.237               | 0.310                  |                            |
| rs29024847                             | Chr3       | 114618417 | 0.327               | 0.416                  | 3                          |
| rs29011076                             | Chr4       | 11913823  | 0.242               | 0.285                  |                            |
| rs29010315                             | Chr4       | 22462513  | 0.234               | 0.334                  |                            |
| rs29013771                             | Chr4       | 54568493  | 0.268               | 0.318                  |                            |
| rs29012382                             | Chr4       | 69495410  | 0.226               | 0.345                  | 4                          |
| rs29017027                             | Chr5       | 16144756  | 0.293               | 0.378                  |                            |
| rs29025811                             | Chr5       | 51065596  | 0.235               | 0.329                  |                            |
| rs29016809                             | Chr5       | 51770120  | 0.254               | 0.366                  |                            |
| rs29016813                             | Chr5       | 51770448  | 0.247               | 0.365                  |                            |
| rs29015212                             | Chr5       | 81548929  | 0.297               | 0.296                  |                            |
| rs29021747                             | Chr5       | 115318910 | 0.262               | 0.302                  |                            |
| rs29015304                             | Chr5       | 125087141 | 0.229               | 0.374                  | 5                          |
| rs29027233                             | Chr6       | 33967205  | 0.341               | 0.372                  |                            |
| rs29027232                             | Chr6       | 33967229  | 0.343               | 0.372                  |                            |
| rs29026121                             | Chr6       | 38600494  | 0.266               | 0.315                  |                            |
| rs29015041                             | Chr6       | 88160023  | 0.297               | 0.286                  | 3                          |
| rs29024503                             | Chr7       | 25760800  | 0.264               | 0.311                  |                            |
| rs29022787                             | Chr7       | 51136954  | 0.225               | 0.368                  | 3                          |
| rs29019365                             | Chr8       | 15244255  | 0.244               | 0.334                  |                            |
| rs29010774                             | Chr8       | 17016654  | 0.337               | 0.381                  |                            |
| rs29016073                             | Chr8       | 32446240  | 0.371               | 0.301                  |                            |
| rs29014626                             | Chr8       | 52301026  | 0.386               | 0.394                  |                            |
| rs29025168                             | Chr8       | 99635999  | 0.293               | 0.353                  |                            |
| rs29010530                             | Chr8       | 104885923 | 0.274               | 0.330                  |                            |
| rs29010533                             | Chr8       | 104888840 | 0.266               | 0.332                  | 6                          |

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|            |       |          |       |       |   |
|------------|-------|----------|-------|-------|---|
| rs29026560 | Chr9  | 47205531 | 0.259 | 0.296 |   |
| rs29023173 | Chr9  | 59305310 | 0.249 | 0.329 |   |
| rs29011074 | Chr9  | 69688197 | 0.234 | 0.293 | 3 |
| ss46526369 | Chr10 | 4751255  | 0.293 | 0.366 |   |
| rs29022059 | Chr10 | 44329810 | 0.269 | 0.323 |   |
| rs29022060 | Chr10 | 44329837 | 0.244 | 0.323 |   |
| rs29021046 | Chr10 | 62484593 | 0.233 | 0.334 |   |
| rs29014988 | Chr10 | 69149924 | 0.227 | 0.347 | 4 |
| rs29021601 | Chr11 | 39253966 | 0.258 | 0.330 |   |
| rs29019760 | Chr11 | 64371895 | 0.278 | 0.400 |   |
| rs29013770 | Chr11 | 78803108 | 0.286 | 0.307 |   |
| rs29026884 | Chr11 | 86777748 | 0.234 | 0.287 |   |
| rs29026883 | Chr11 | 86777914 | 0.263 | 0.328 | 4 |
| rs29018847 | Chr12 | 9713260  | 0.249 | 0.330 |   |
| rs29015935 | Chr12 | 16810706 | 0.283 | 0.352 |   |
| rs29011179 | Chr12 | 43406630 | 0.245 | 0.348 |   |
| rs29019295 | Chr12 | 46635688 | 0.259 | 0.319 | 4 |
| rs29020369 | Chr13 | 10218293 | 0.332 | 0.288 |   |
| rs29020370 | Chr13 | 10218647 | 0.317 | 0.340 |   |
| rs29019461 | Chr13 | 10423704 | 0.355 | 0.302 |   |
| rs29016959 | Chr13 | 22767093 | 0.372 | 0.384 |   |
| rs29012117 | Chr13 | 28925713 | 0.298 | 0.347 |   |
| rs29014450 | Chr13 | 36360017 | 0.281 | 0.302 | 5 |
| rs29024079 | Chr14 | 43126764 | 0.227 | 0.340 |   |
| rs29019586 | Chr14 | 46902020 | 0.266 | 0.361 |   |
| rs29019588 | Chr14 | 46902349 | 0.257 | 0.353 |   |
| rs29026018 | Chr14 | 59924544 | 0.240 | 0.300 |   |
| rs29027601 | Chr14 | 72632952 | 0.285 | 0.350 | 4 |
| rs29019566 | Chr15 | 18646517 | 0.250 | 0.321 |   |
| rs29017211 | Chr15 | 25472681 | 0.337 | 0.404 | 2 |
| rs29026036 | Chr16 | 23320813 | 0.265 | 0.308 |   |
| rs29026034 | Chr16 | 23320981 | 0.225 | 0.301 |   |
| rs29016037 | Chr16 | 30575585 | 0.390 | 0.362 |   |
| rs29016039 | Chr16 | 30575950 | 0.273 | 0.288 |   |
| rs29021963 | Chr16 | 31068223 | 0.415 | 0.413 |   |
| rs29013788 | Chr16 | 63283574 | 0.368 | 0.401 | 4 |
| rs29012677 | Chr17 | 36428918 | 0.227 | 0.327 | 1 |
| rs29018173 | Chr20 | 71369970 | 0.256 | 0.332 |   |
| rs29018172 | Chr20 | 71370022 | 0.262 | 0.360 |   |
| rs29018171 | Chr20 | 71370040 | 0.254 | 0.332 | 1 |
| rs29022043 | Chr21 | 25155413 | 0.255 | 0.320 |   |
| rs29024337 | Chr21 | 28633622 | 0.276 | 0.330 |   |
| rs29020829 | Chr22 | 29199086 | 0.326 | 0.311 |   |
| rs29024065 | Chr22 | 40139571 | 0.325 | 0.289 | 2 |
| rs29022423 | Chr24 | 16734115 | 0.301 | 0.371 |   |
| rs29022422 | Chr24 | 16734137 | 0.338 | 0.378 |   |
| rs29022420 | Chr24 | 16734180 | 0.307 | 0.369 |   |
| rs29022419 | Chr24 | 16734288 | 0.301 | 0.372 |   |
| rs29020891 | Chr24 | 42951736 | 0.287 | 0.353 |   |
| rs29020890 | Chr24 | 42951766 | 0.297 | 0.354 | 2 |
| rs29009898 | Chr26 | 38545913 | 0.251 | 0.305 | 1 |
| rs29018070 | Chr28 | 9812769  | 0.231 | 0.335 |   |
| rs29010304 | Chr28 | 24504312 | 0.236 | 0.289 | 2 |

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|                                       |       |           |        |        |   |
|---------------------------------------|-------|-----------|--------|--------|---|
| rs29022139                            | Chr29 | 17109628  | 0.378  | 0.362  |   |
| rs29022136                            | Chr29 | 17109723  | 0.356  | 0.399  | 1 |
| <b>Low <math>F_{ST}</math> values</b> |       |           |        |        |   |
| rs29012718                            | Chr1  | 34411661  | -0.001 | 0.028  |   |
| rs29019865                            | Chr1  | 92434645  | 0.011  | 0.007  |   |
| rs29020075                            | Chr1  | 126527179 | 0.010  | -0.007 |   |
| ss46526384                            | Chr1  | 128455404 | 0.003  | -0.000 | 3 |
| rs29016991                            | Chr2  | 30526182  | 0.001  | 0.004  |   |
| rs29025558                            | Chr2  | 54689711  | 0.007  | 0.002  | 2 |
| rs29019239                            | Chr4  | 114174215 | 0.012  | 0.026  | 1 |
| rs29018352                            | Chr5  | 93564418  | 0.011  | 0.036  | 1 |
| rs29015661                            | Chr6  | 12676368  | 0.011  | -0.000 |   |
| rs29024817                            | Chr6  | 13520547  | 0.012  | 0.018  |   |
| rs29014057                            | Chr6  | 97914357  | 0.002  | 0.013  | 3 |
| rs29021149                            | Chr7  | 22240287  | 0.007  | 0.011  |   |
| rs29017155                            | Chr7  | 97248925  | 0.012  | 0.028  |   |
| rs29012040                            | Chr7  | 109947142 | 0.004  | 0.021  |   |
| rs29012041                            | Chr7  | 109947258 | 0.004  | 0.021  | 3 |
| rs29011742                            | Chr9  | 10126654  | -0.003 | 0.017  |   |
| rs29010261                            | Chr9  | 87665546  | 0.013  | 0.032  | 2 |
| rs29020613                            | Chr10 | 71913488  | 0.012  | -0.003 |   |
| rs29013291                            | Chr10 | 73992679  | 0.012  | -0.003 | 2 |
| rs29025295                            | Chr12 | 61844028  | -0.009 | -0.004 |   |
| rs29022322                            | Chr12 | 74942777  | 0.007  | -0.016 | 2 |
| rs29024875                            | Chr13 | 19907640  | -0.002 | 0.000  |   |
| rs29021123                            | Chr13 | 72076285  | 0.012  | 0.036  | 2 |
| rs29016325                            | Chr17 | 16965701  | 0.001  | 0.037  | 1 |
| rs29018263                            | Chr18 | 5326992   | 0.005  | 0.028  |   |
| rs29022891                            | Chr18 | 64492276  | -0.001 | 0.038  | 2 |
| ss46526683                            | Chr19 | 17985815  | 0.007  | 0.003  | 1 |
| rs29019870                            | Chr20 | 12956157  | 0.014  | 0.028  | 1 |
| rs29010492                            | Chr23 | 30238489  | 0.012  | 0.027  | 1 |
| rs29025657                            | Chr27 | 43902917  | -0.007 | 0.000  | 1 |
| rs29011567                            | Chr28 | 8736524   | -0.001 | 0.037  | 1 |
| rs29010145                            | Chr29 | 1813619   | 0.006  | 0.026  |   |
| rs29022138                            | Chr29 | 17109634  | 0.004  | -0.006 | 1 |
| rs29011290                            | ChrX  | 73056128  | 0.010  | 0.020  |   |
| rs29026155                            | ChrX  | 80352324  | -0.009 | 0.033  | 2 |