**Additional file 3 Table S3 SNP alleles for the AA14H3, CH19H2, and SI16H5 haplotypes**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Haplotype** | **Chromosome** | **SNP name** | **SNP position (bp)** | **SNP allele** |
| AA14H3 | 14 | HAPMAP24518-BTC-062393 | 8064004 | C |
|  |  | HAPMAP31989-BTC-062364 | 8113083 | C |
|  |  | HAPMAP41162-BTA-115830 | 8144892 | C |
|  |  | HAPMAP27714-BTC-062128 | 8207783 | A |
|  |  | HAPMAP30140-BTC-046976 | 8241174 | A |
|  |  | ARS-BFGL-NGS-28337 | 8264685 | A |
|  |  | HAPMAP26322-BTC-062079 | 8351971 | A |
|  |  | UA-IFASA-8561 | 8385937 | A |
|  |  | HAPMAP31987-BTC-062044 | 8425401 | C |
|  |  | HAPMAP22779-BTC-061888 | 8454690 | A |
|  |  | HAPMAP26904-BTC-061747 | 8479608 | A |
|  |  | HAPMAP22964-BTC-001504 | 8529243 | G |
|  |  | HAPMAP27836-BTC-052671 | 8551460 | A |
|  |  | HAPMAP26030-BTC-052382 | 8621379 | C |
|  |  | ARS-BFGL-NGS-85289 | 8659069 | A |
|  |  | HAPMAP31945-BTC-052169 | 8698150 | C |
|  |  | HAPMAP22724-BTC-001541 | 8730305 | A |
|  |  | ARS-BFGL-NGS-19923 | 8851361 | A |
|  |  | ARS-BFGL-NGS-76248 | 8879810 | A |
|  |  | UA-IFASA-7476 | 8927881 | C |
| CH19H2 | 19 | IDBV31900008656 | 48874999 | G |
|  |  | IDBV31900008658 | 48875131 | G |
|  |  | IDBV21900002820 | 48875852 | C |
|  |  | IDBV31900008668 | 48875866 | A |
|  |  | IDBV31900008680 | 48883348 | A |
|  |  | IDBV21900002861 | 48887256 | C |
|  |  | IDBV31900008693 | 48889014 | C |
|  |  | IDBV21900002872 | 48889025 | C |
|  |  | IDBV21900002873 | 48889311 | G |
|  |  | IDBV21900002884 | 48889825 | A |
|  |  | IDBV21900002885 | 48889874 | A |
|  |  | IDBV21900002888 | 48890897 | C |
|  |  | IDBV31900008702 | 48890934 | A |
|  |  | IDBV31900008704 | 48891361 | C |
|  |  | IDBV21900002911 | 48891663 | C |
|  |  | IDBV31900008728 | 48899093 | C |
|  |  | IDBV31900008732 | 48899230 | A |
|  |  | IDBV21900002954 | 48900428 | C |
|  |  | IDBV21900002965 | 48901947 | C |
|  |  | IDBV31900008738 | 48902319 | A |
| SI16H5 | 16 | ARS-BFGL-NGS-743 | 51811400 | G |
|  |  | ARS-BFGL-NGS-173 | 51833247 | C |
|  |  | UA-IFASA-920 | 51914451 | A |
|  |  | ARS-BFGL-NGS-41367 | 51942323 | A |
|  |  | BTB-00646135 | 52141211 | A |
|  |  | BTB-00646146 | 52168565 | C |
|  |  | BTB-00646159 | 52211744 | C |
|  |  | ARS-BFGL-NGS-27516 | 52510377 | C |
|  |  | ARS-BFGL-NGS-116396 | 52786297 | A |
|  |  | ARS-BFGL-NGS-78363 | 52975189 | G |
|  |  | UA-IFASA-8741 | 53070045 | C |
|  |  | ARS-BFGL-NGS-112066 | 53097936 | G |
|  |  | ARS-BFGL-NGS-2902 | 53199787 | A |
|  |  | IDBV31600008012 | 53248415 | C |
|  |  | IDBV31600008013 | 53262642 | C |
|  |  | ARS-BFGL-NGS-4009 | 53279306 | A |
|  |  | BTA-39204-NO-RS | 53330998 | G |
|  |  | ARS-BFGL-NGS-8174 | 53354164 | C |
|  |  | IDBV31600008014 | 53419817 | G |
|  |  | ARS-BFGL-NGS-117470 | 53434159 | A |