

## Supplementary Information

### Common variants at 6q22 and 17q21 are associated with intracranial volume.

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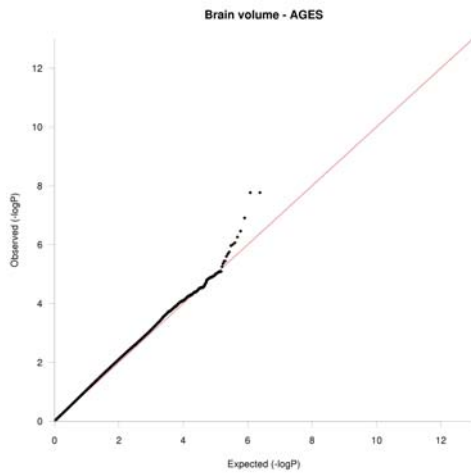
or

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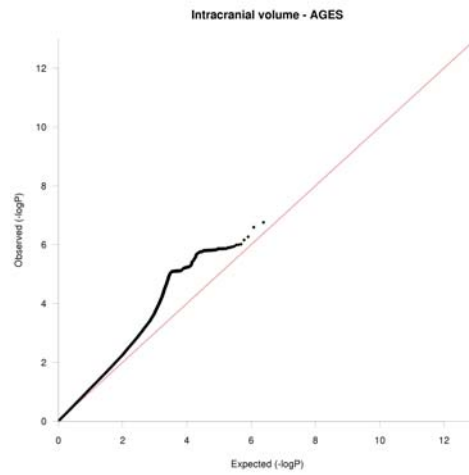
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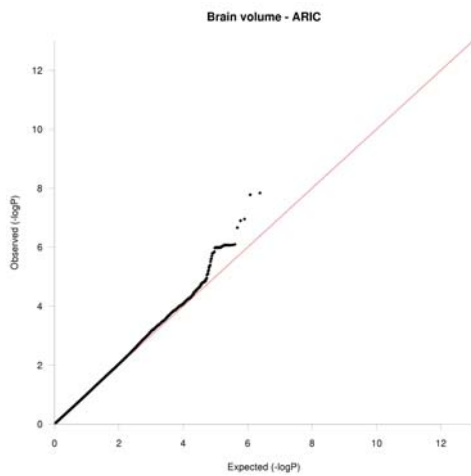
**Supplementary Figure 1. Quantile-quantile plots for brain volume and intracranial volume for each cohort separately.**



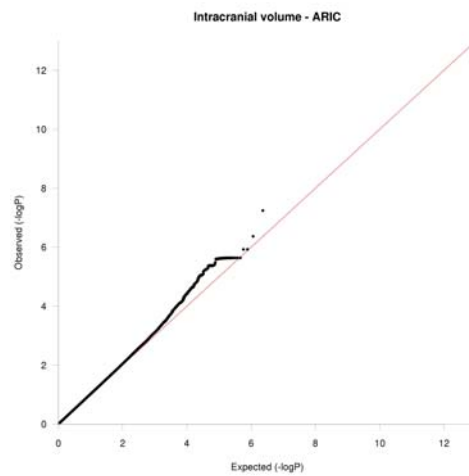
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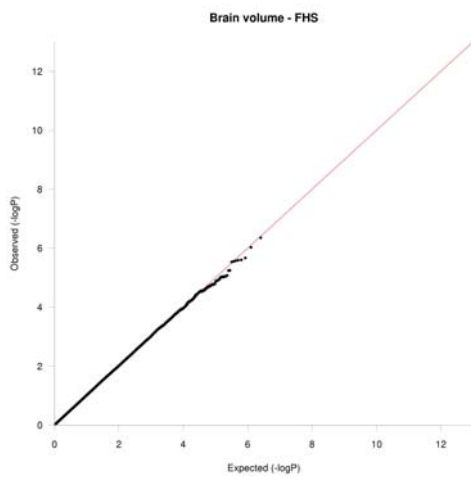
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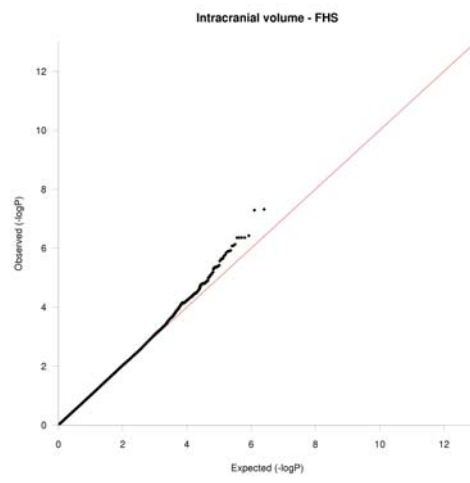
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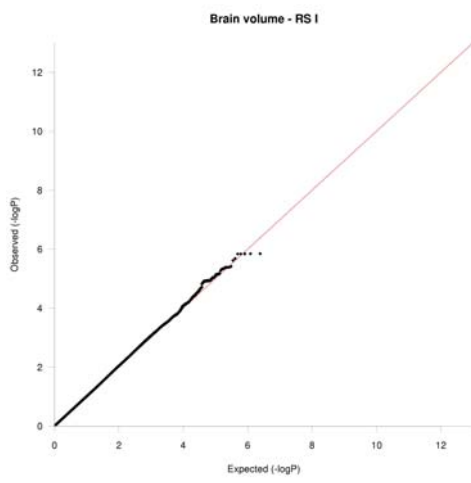
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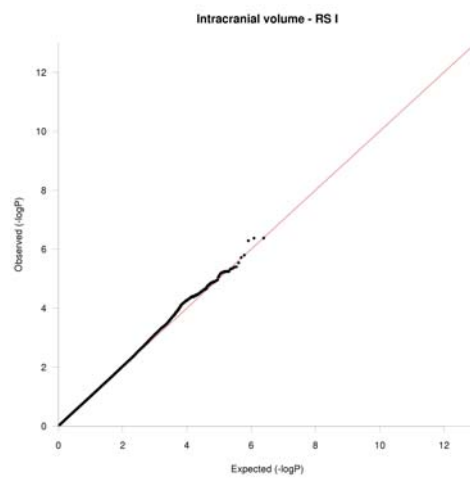
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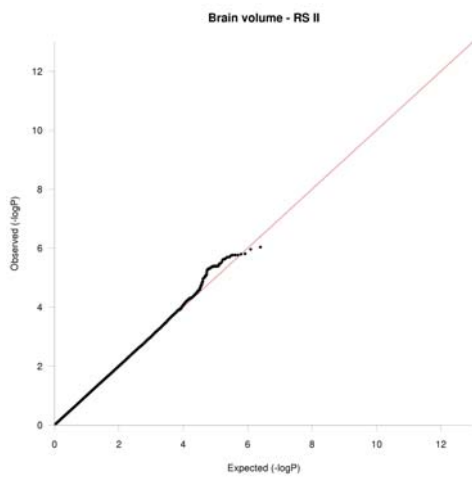
$\lambda=1.01$



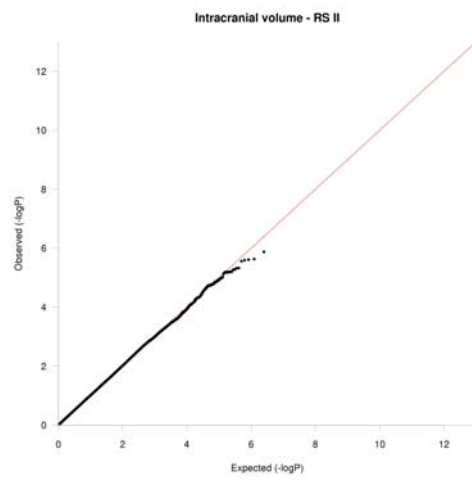
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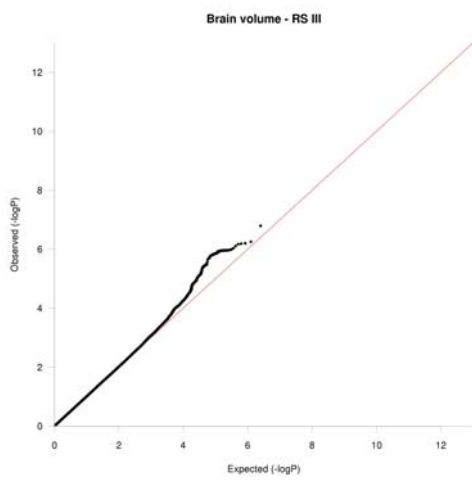
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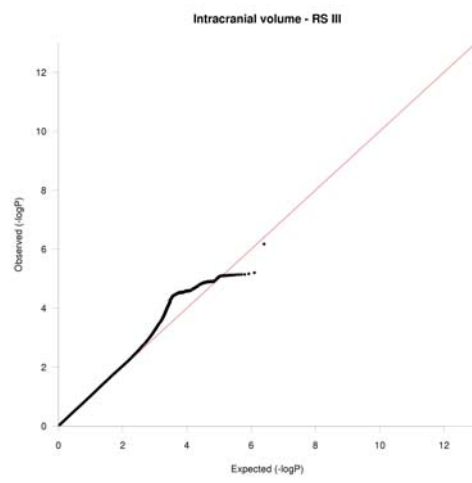
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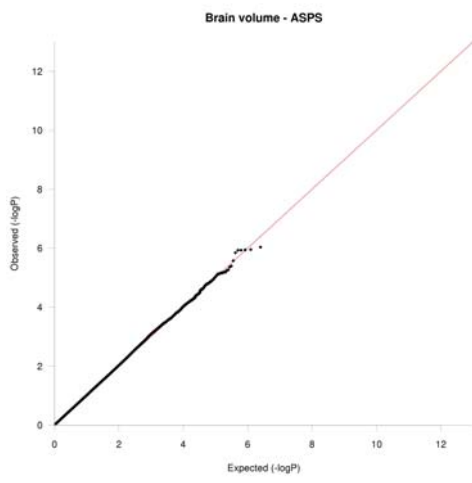
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$\lambda=1.01$

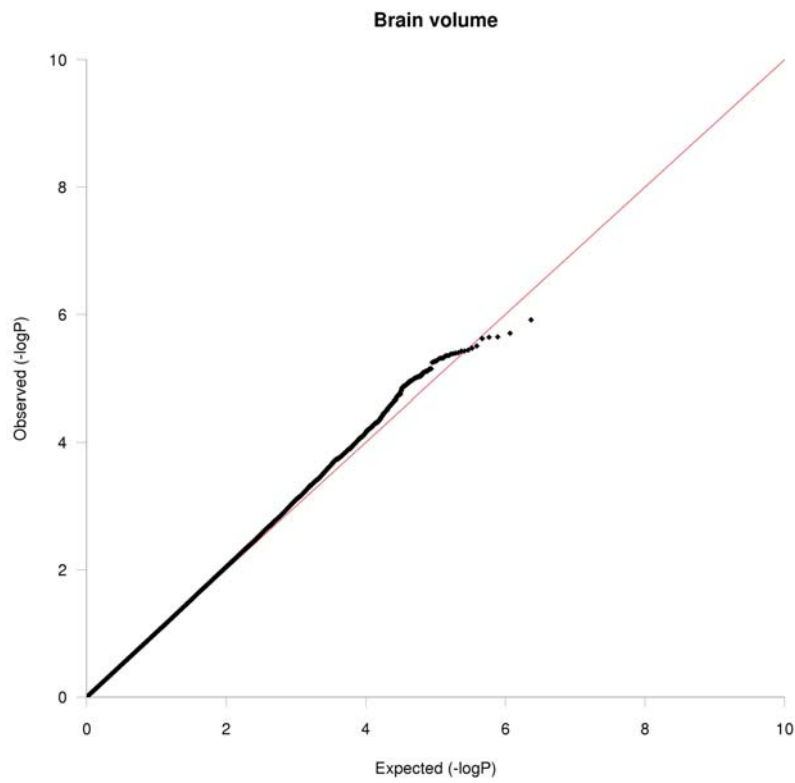


$\lambda=1.04$



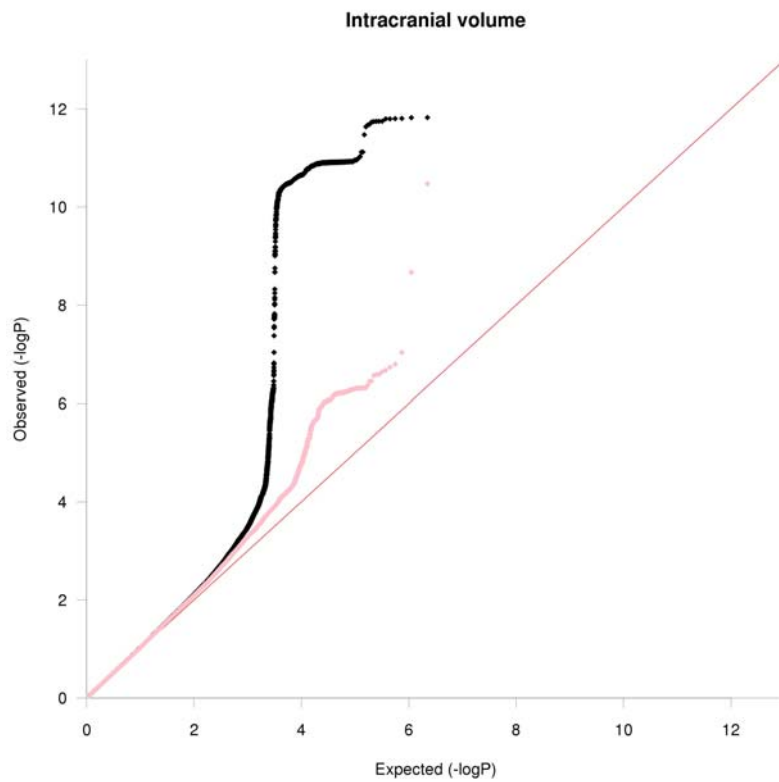
$$\lambda=1.02$$

**Supplementary Figure 2. Quantile-quantile plots for brain volume and intracranial volume for the discovery meta-analysis.**



$\lambda=1.02$

Q-Q plot for the GWAS meta-analysis on brain volume.



**$\lambda=1.04$  (black curve)**

Q-Q plot for the GWAS meta-analysis on intracranial volume. Black dots represent the plot for the entire GWAS; pink dots represent the plot after exclusion of the chromosome 17 inversion



**Supplementary Table 1. SNPs with  $p < 10^{-5}$  in the GWAS on brain volume.**

| name       | chr | position  | strand | allele1 | allele2 | coded allele | frequency coded allele | beta  | sebeta | chi <sup>2</sup> | p                    |
|------------|-----|-----------|--------|---------|---------|--------------|------------------------|-------|--------|------------------|----------------------|
| rs11142352 | 9   | 72095742  | +      | T       | G       | G            | 0.08                   | -0.47 | 0.10   | 23.5             | 1.2*10 <sup>-6</sup> |
| rs4569183  | 14  | 83972025  | +      | T       | C       | C            | 0.40                   | -0.22 | 0.05   | 22.6             | 2.0*10 <sup>-6</sup> |
| rs1981270  | 1   | 56540679  | +      | T       | C       | C            | 0.40                   | 0.22  | 0.05   | 22.4             | 2.3*10 <sup>-6</sup> |
| rs2582801  | 8   | 97680069  | +      | A       | G       | G            | 0.46                   | 0.22  | 0.05   | 22.3             | 2.3*10 <sup>-6</sup> |
| rs10138991 | 14  | 83969190  | +      | A       | G       | G            | 0.40                   | -0.22 | 0.05   | 22.2             | 2.4*10 <sup>-6</sup> |
| rs2455051  | 8   | 97746258  | +      | A       | G       | G            | 0.26                   | -0.24 | 0.05   | 21.7             | 3.1*10 <sup>-6</sup> |
| rs11785322 | 8   | 97796192  | +      | T       | G       | G            | 0.27                   | -0.25 | 0.05   | 21.6             | 3.4*10 <sup>-6</sup> |
| rs10504966 | 8   | 97786653  | +      | T       | G       | G            | 0.27                   | -0.24 | 0.05   | 21.4             | 3.7*10 <sup>-6</sup> |
| rs7017167  | 8   | 97780435  | +      | T       | C       | C            | 0.73                   | 0.24  | 0.05   | 21.4             | 3.8*10 <sup>-6</sup> |
| rs10504965 | 8   | 97782942  | +      | T       | G       | G            | 0.73                   | 0.24  | 0.05   | 21.4             | 3.8*10 <sup>-6</sup> |
| rs2464477  | 8   | 97771795  | +      | A       | T       | T            | 0.27                   | -0.24 | 0.05   | 21.3             | 4.0*10 <sup>-6</sup> |
| rs2464480  | 8   | 97747832  | +      | T       | C       | C            | 0.26                   | -0.24 | 0.05   | 21.2             | 4.1*10 <sup>-6</sup> |
| rs2455046  | 8   | 97767040  | +      | T       | C       | C            | 0.26                   | -0.24 | 0.05   | 21.2             | 4.1*10 <sup>-6</sup> |
| rs2455053  | 8   | 97764494  | +      | T       | G       | G            | 0.26                   | -0.24 | 0.05   | 21.2             | 4.2*10 <sup>-6</sup> |
| rs8006640  | 14  | 83979059  | +      | A       | G       | G            | 0.39                   | -0.22 | 0.05   | 21.1             | 4.4*10 <sup>-6</sup> |
| rs12883344 | 14  | 83981301  | +      | A       | C       | C            | 0.61                   | 0.22  | 0.05   | 21.1             | 4.4*10 <sup>-6</sup> |
| rs8022233  | 14  | 83978679  | +      | T       | C       | C            | 0.61                   | 0.22  | 0.05   | 21.0             | 4.5*10 <sup>-6</sup> |
| rs8091622  | 18  | 38881684  | +      | T       | C       | C            | 0.07                   | 0.41  | 0.09   | 20.9             | 4.8*10 <sup>-6</sup> |
| rs9945309  | 18  | 38883414  | +      | T       | C       | C            | 0.07                   | 0.41  | 0.09   | 20.9             | 4.8*10 <sup>-6</sup> |
| rs12451772 | 17  | 60897752  | +      | T       | C       | C            | 0.96                   | -0.70 | 0.15   | 20.9             | 4.9*10 <sup>-6</sup> |
| rs4341830  | 18  | 38873704  | +      | A       | G       | G            | 0.07                   | 0.41  | 0.09   | 20.8             | 5.0*10 <sup>-6</sup> |
| rs1272255  | 3   | 106480980 | +      | G       | C       | C            | 0.24                   | 0.26  | 0.06   | 20.7             | 5.3*10 <sup>-6</sup> |
| rs1267692  | 3   | 106481385 | +      | A       | G       | G            | 0.24                   | 0.26  | 0.06   | 20.7             | 5.4*10 <sup>-6</sup> |
| rs1259446  | 3   | 106481446 | +      | T       | C       | C            | 0.24                   | 0.26  | 0.06   | 20.7             | 5.4*10 <sup>-6</sup> |
| rs1795302  | 3   | 106481458 | +      | T       | C       | C            | 0.76                   | -0.26 | 0.06   | 20.6             | 5.6*10 <sup>-6</sup> |
| rs1272776  | 3   | 106481481 | +      | A       | G       | G            | 0.76                   | -0.26 | 0.06   | 20.6             | 5.7*10 <sup>-6</sup> |
| rs4625859  | 2   | 29661678  | +      | A       | G       | G            | 0.98                   | -1.08 | 0.24   | 20.2             | 7.2*10 <sup>-6</sup> |

|            |    |           |   |   |   |   |      |       |      |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|------|------|----------------------|
| rs17113726 | 1  | 56552211  | + | A | G | G | 0.96 | -0.54 | 0.12 | 20.1 | 7.2*10 <sup>-6</sup> |
| rs12759658 | 1  | 56553695  | + | T | C | C | 0.04 | 0.54  | 0.12 | 20.1 | 7.3*10 <sup>-6</sup> |
| rs3929899  | 1  | 56568007  | + | A | C | C | 0.96 | -0.54 | 0.12 | 20.0 | 7.7*10 <sup>-6</sup> |
| rs17113749 | 1  | 56559319  | + | T | G | G | 0.96 | -0.54 | 0.12 | 20.0 | 7.8*10 <sup>-6</sup> |
| rs12739422 | 1  | 56553751  | + | T | C | C | 0.96 | -0.54 | 0.12 | 20.0 | 7.8*10 <sup>-6</sup> |
| rs10493203 | 1  | 56555167  | + | A | G | G | 0.96 | -0.54 | 0.12 | 20.0 | 7.9*10 <sup>-6</sup> |
| rs12756361 | 1  | 56557150  | + | T | C | C | 0.96 | -0.54 | 0.12 | 19.9 | 8.2*10 <sup>-6</sup> |
| rs2447835  | 5  | 103940347 | + | G | C | C | 0.96 | 0.53  | 0.12 | 19.9 | 8.2*10 <sup>-6</sup> |
| rs10493204 | 1  | 56556533  | + | A | G | G | 0.96 | -0.54 | 0.12 | 19.9 | 8.3*10 <sup>-6</sup> |
| rs2455044  | 8  | 97767418  | + | A | G | G | 0.26 | -0.24 | 0.05 | 19.7 | 9.1*10 <sup>-6</sup> |
| rs4635264  | 14 | 83938984  | + | A | C | C | 0.42 | -0.21 | 0.05 | 19.6 | 9.3*10 <sup>-6</sup> |
| rs8017429  | 14 | 83955805  | + | T | G | G | 0.42 | -0.21 | 0.05 | 19.6 | 9.4*10 <sup>-6</sup> |
| rs12891609 | 14 | 83942643  | + | A | G | G | 0.58 | 0.21  | 0.05 | 19.6 | 9.4*10 <sup>-6</sup> |
| rs12895750 | 14 | 83942754  | + | G | C | C | 0.42 | -0.21 | 0.05 | 19.6 | 9.4*10 <sup>-6</sup> |
| rs625525   | 1  | 91770181  | + | T | C | C | 0.51 | 0.20  | 0.05 | 19.6 | 9.6*10 <sup>-6</sup> |
| rs6688261  | 1  | 91759622  | + | T | C | C | 0.51 | 0.20  | 0.05 | 19.6 | 9.6*10 <sup>-6</sup> |
| rs12125947 | 1  | 91763075  | + | T | C | C | 0.49 | -0.20 | 0.05 | 19.5 | 9.8*10 <sup>-6</sup> |
| rs1574781  | 1  | 179801094 | + | A | G | G | 0.84 | -0.28 | 0.06 | 19.5 | 9.9*10 <sup>-6</sup> |
| rs9787125  | 1  | 56569003  | + | A | G | G | 0.04 | 0.53  | 0.12 | 19.5 | 1.0*10 <sup>-5</sup> |

**Supplementary Table 2. SNPs with  $p < 10^{-5}$  in the GWAS on intracranial volume.**

| name       | chr | position | strand | allele1 | allele2 | coded allele | frequency coded allele | beta  | sebeta | chi <sup>2</sup> | p                     |
|------------|-----|----------|--------|---------|---------|--------------|------------------------|-------|--------|------------------|-----------------------|
| rs9915547  | 17  | 41568559 | +      | T       | C       | C            | 0.22                   | -14.7 | 2.1    | 50.0             | 1.5*10 <sup>-12</sup> |
| rs10221243 | 17  | 41568087 | +      | A       | G       | G            | 0.78                   | 14.7  | 2.1    | 50.0             | 1.5*10 <sup>-12</sup> |
| rs7207582  | 17  | 41566710 | +      | A       | G       | G            | 0.22                   | -14.7 | 2.1    | 50.0             | 1.6*10 <sup>-12</sup> |
| rs9303525  | 17  | 41543040 | +      | A       | G       | G            | 0.22                   | -14.7 | 2.1    | 49.9             | 1.6*10 <sup>-12</sup> |
| rs6503457  | 17  | 41564089 | +      | T       | G       | G            | 0.78                   | 14.7  | 2.1    | 49.9             | 1.6*10 <sup>-12</sup> |
| rs8070942  | 17  | 41564451 | +      | T       | G       | G            | 0.78                   | 14.7  | 2.1    | 49.9             | 1.6*10 <sup>-12</sup> |
| rs7350980  | 17  | 41466118 | +      | A       | G       | G            | 0.78                   | 14.6  | 2.1    | 49.7             | 1.8*10 <sup>-12</sup> |
| rs4597358  | 17  | 41466517 | +      | G       | C       | C            | 0.78                   | 14.6  | 2.1    | 49.7             | 1.8*10 <sup>-12</sup> |
| rs8077487  | 17  | 41471287 | +      | T       | C       | C            | 0.22                   | -14.6 | 2.1    | 49.7             | 1.8*10 <sup>-12</sup> |
| rs7221390  | 17  | 41472797 | +      | T       | G       | G            | 0.22                   | -14.6 | 2.1    | 49.7             | 1.8*10 <sup>-12</sup> |
| rs7218319  | 17  | 41482217 | +      | T       | C       | C            | 0.78                   | 14.6  | 2.1    | 49.6             | 1.9*10 <sup>-12</sup> |
| rs2066899  | 17  | 41511550 | +      | T       | C       | C            | 0.78                   | 14.6  | 2.1    | 49.4             | 2.1*10 <sup>-12</sup> |
| rs8080583  | 17  | 41518415 | +      | A       | C       | C            | 0.78                   | 14.6  | 2.1    | 49.4             | 2.1*10 <sup>-12</sup> |
| rs1918793  | 17  | 41583946 | +      | T       | C       | C            | 0.78                   | 14.7  | 2.1    | 49.2             | 2.3*10 <sup>-12</sup> |
| rs2532274  | 17  | 41602941 | +      | A       | G       | G            | 0.22                   | -14.7 | 2.1    | 48.5             | 3.4*10 <sup>-12</sup> |
| rs2696590  | 17  | 41577379 | +      | G       | C       | C            | 0.21                   | -14.7 | 2.2    | 46.9             | 7.6*10 <sup>-12</sup> |
| rs17660847 | 17  | 41545156 | +      | T       | C       | C            | 0.79                   | 14.7  | 2.2    | 46.9             | 7.6*10 <sup>-12</sup> |
| rs1991556  | 17  | 41439239 | +      | A       | G       | G            | 0.78                   | 14.4  | 2.1    | 46.4             | 9.4*10 <sup>-12</sup> |
| rs12185243 | 17  | 41471198 | +      | T       | C       | C            | 0.21                   | -14.6 | 2.1    | 46.4             | 9.9*10 <sup>-12</sup> |
| rs2077551  | 17  | 41570665 | +      | T       | C       | C            | 0.21                   | -14.6 | 2.1    | 46.2             | 1.1*10 <sup>-11</sup> |
| rs1406069  | 17  | 41581663 | +      | A       | G       | G            | 0.79                   | 14.6  | 2.1    | 46.1             | 1.1*10 <sup>-11</sup> |
| rs2696577  | 17  | 41583659 | +      | G       | C       | C            | 0.79                   | 14.6  | 2.1    | 46.1             | 1.1*10 <sup>-11</sup> |
| rs17653193 | 17  | 41468288 | +      | A       | G       | G            | 0.79                   | 14.9  | 2.2    | 46.1             | 1.1*10 <sup>-11</sup> |
| rs12150320 | 17  | 41568981 | +      | T       | C       | C            | 0.79                   | 14.2  | 2.1    | 46.0             | 1.2*10 <sup>-11</sup> |
| rs2532316  | 17  | 41569489 | +      | A       | G       | G            | 0.79                   | 14.2  | 2.1    | 46.0             | 1.2*10 <sup>-11</sup> |
| rs2696605  | 17  | 41569698 | +      | A       | C       | C            | 0.21                   | -14.2 | 2.1    | 46.0             | 1.2*10 <sup>-11</sup> |
| rs2532315  | 17  | 41569711 | +      | A       | G       | G            | 0.79                   | 14.2  | 2.1    | 46.0             | 1.2*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2696604  | 17 | 41569871 | + | A | G | G | 0.21 | -14.2 | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs2696602  | 17 | 41571673 | + | T | C | C | 0.79 | 14.2  | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs2696601  | 17 | 41571935 | + | T | C | C | 0.21 | -14.2 | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs2696600  | 17 | 41572003 | + | A | G | G | 0.21 | -14.2 | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs2532314  | 17 | 41572889 | + | T | G | G | 0.79 | 14.2  | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs2532313  | 17 | 41573070 | + | A | G | G | 0.79 | 14.2  | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs1918801  | 17 | 41573821 | + | A | T | T | 0.21 | -14.2 | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs1918800  | 17 | 41573915 | + | T | C | C | 0.79 | 14.2  | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs1918799  | 17 | 41574019 | + | T | C | C | 0.79 | 14.2  | 2.1 | 46.0 | 1.2*10 <sup>-11</sup> |
| rs1528075  | 17 | 41576231 | + | T | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs12150087 | 17 | 41566765 | + | G | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs2532307  | 17 | 41577127 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs1406074  | 17 | 41577844 | + | T | G | G | 0.21 | -14.3 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs2696592  | 17 | 41577253 | + | A | T | T | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs12150048 | 17 | 41183242 | + | G | C | C | 0.22 | -14.5 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs2222746  | 17 | 41577796 | + | T | G | G | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs1918798  | 17 | 41578112 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577094 | 17 | 41543275 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577159 | 17 | 41544260 | + | T | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17576954 | 17 | 41537745 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17576989 | 17 | 41539399 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577052 | 17 | 41542084 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577024 | 17 | 41542035 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs2696587  | 17 | 41578237 | + | T | G | G | 0.21 | -14.3 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17660865 | 17 | 41545191 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17576842 | 17 | 41535804 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17660907 | 17 | 41546868 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs2532305  | 17 | 41578837 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs1918797  | 17 | 41579020 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17660936 | 17 | 41546942 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17585012 | 17 | 41583287 | + | A | T | T | 0.21 | -14.3 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17576870 | 17 | 41536254 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17660488 | 17 | 41534150 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17662115 | 17 | 41583308 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs2696581  | 17 | 41582963 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17576779 | 17 | 41534085 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577313 | 17 | 41547612 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs4630591  | 17 | 41548345 | + | T | C | C | 0.79 | 14.4  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs4548919  | 17 | 41548172 | + | T | G | G | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17660595 | 17 | 41536766 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577975 | 17 | 41566219 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17577369 | 17 | 41548702 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17661015 | 17 | 41548736 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17661027 | 17 | 41548876 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17660464 | 17 | 41533806 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17661348 | 17 | 41562844 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.2*10 <sup>-11</sup> |
| rs17661385 | 17 | 41563555 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17576709 | 17 | 41529173 | + | G | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17577954 | 17 | 41565405 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs10514904 | 17 | 41563664 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17661045 | 17 | 41549931 | + | A | T | T | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17577447 | 17 | 41550160 | + | A | T | T | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs1122381  | 17 | 41561617 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17661428 | 17 | 41563921 | + | G | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs1122380  | 17 | 41561857 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17576695 | 17 | 41528144 | + | A | T | T | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs4471723  | 17 | 41561468 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17577877 | 17 | 41563995 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs10514901 | 17 | 41550514 | + | T | G | G | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17577496 | 17 | 41550614 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17660398 | 17 | 41526429 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs1468241  | 17 | 41551932 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17661141 | 17 | 41551794 | + | G | C | C | 0.79 | 14.2  | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17577650 | 17 | 41561278 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs4383188  | 17 | 41553381 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17576631 | 17 | 41525836 | + | G | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17660337 | 17 | 41525423 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17660294 | 17 | 41522919 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.9 | 1.3*10 <sup>-11</sup> |
| rs17660251 | 17 | 41522464 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17660228 | 17 | 41522318 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17660167 | 17 | 41522129 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17660132 | 17 | 41521621 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs1076222  | 17 | 41465616 | + | G | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574425 | 17 | 41465035 | + | G | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17652961 | 17 | 41464202 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574361 | 17 | 41464049 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574604 | 17 | 41467460 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17653162 | 17 | 41467674 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17653211 | 17 | 41468485 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs7350928  | 17 | 41463947 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs11079729 | 17 | 41471416 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574824 | 17 | 41470954 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs12150542 | 17 | 41471577 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574796 | 17 | 41470921 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574228 | 17 | 41460355 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs12150090 | 17 | 41471733 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17652748 | 17 | 41459462 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs7687     | 17 | 41459142 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs10514897 | 17 | 41473244 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs16940799 | 17 | 41458779 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs17574040 | 17 | 41458711 | + | A | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs1052594  | 17 | 41458535 | + | G | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs10514898 | 17 | 41475485 | + | A | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs1052587  | 17 | 41458449 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.8 | 1.3*10 <sup>-11</sup> |
| rs9468     | 17 | 41457408 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs12150447 | 17 | 41483977 | + | A | C | C | 0.21 | -14.2 | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs3912061  | 17 | 41520916 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs12150064 | 17 | 41484259 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs17653836 | 17 | 41484728 | + | A | T | T | 0.79 | 14.2  | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs17575423 | 17 | 41485105 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs17652502 | 17 | 41450308 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.7 | 1.4*10 <sup>-11</sup> |
| rs17575437 | 17 | 41488867 | + | A | T | T | 0.79 | 14.2  | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs17653889 | 17 | 41488906 | + | A | T | T | 0.21 | -14.2 | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs17573858 | 17 | 41446633 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs17653906 | 17 | 41488978 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs12150170 | 17 | 41446483 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs17575507 | 17 | 41489931 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs876944   | 17 | 41490227 | + | T | G | G | 0.79 | 14.2  | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs1117253  | 17 | 41505119 | + | A | C | C | 0.21 | -14.2 | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs974293   | 17 | 41506055 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs733966   | 17 | 41445400 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.6 | 1.4*10 <sup>-11</sup> |
| rs1107820  | 17 | 41491195 | + | T | C | C | 0.21 | -14.2 | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs17575556 | 17 | 41491663 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs17659731 | 17 | 41500456 | + | A | G | G | 0.79 | 14.2  | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs17575850 | 17 | 41500209 | + | A | C | C | 0.79 | 14.2  | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs17653998 | 17 | 41491821 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs17652449 | 17 | 41444774 | + | G | C | C | 0.21 | -14.2 | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs2316951  | 17 | 41494901 | + | G | C | C | 0.21 | -14.2 | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs17575683 | 17 | 41495480 | + | T | C | C | 0.79 | 14.2  | 2.1 | 45.6 | 1.5*10 <sup>-11</sup> |
| rs2838     | 17 | 41497167 | + | A | G | G | 0.21 | -14.2 | 2.1 | 45.5 | 1.5*10 <sup>-11</sup> |
| rs2696565  | 17 | 41700857 | + | T | C | C | 0.79 | 14.8  | 2.2 | 45.5 | 1.5*10 <sup>-11</sup> |
| rs2732653  | 17 | 41701296 | + | A | G | G | 0.79 | 14.8  | 2.2 | 45.5 | 1.5*10 <sup>-11</sup> |
| rs2532338  | 17 | 41701816 | + | A | G | G | 0.21 | -14.8 | 2.2 | 45.5 | 1.5*10 <sup>-11</sup> |
| rs17653255 | 17 | 41468590 | + | A | C | C | 0.79 | 14.5  | 2.1 | 45.5 | 1.5*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2696574  | 17 | 41585874 | + | T | C | C | 0.79 | 14.6  | 2.2 | 45.5 | 1.5*10 <sup>-11</sup> |
| rs2696561  | 17 | 41702170 | + | G | C | C | 0.79 | 14.8  | 2.2 | 45.5 | 1.5*10 <sup>-11</sup> |
| rs2732656  | 17 | 41702942 | + | T | C | C | 0.21 | -14.8 | 2.2 | 45.4 | 1.6*10 <sup>-11</sup> |
| rs2532331  | 17 | 41704103 | + | A | G | G | 0.79 | 14.8  | 2.2 | 45.4 | 1.6*10 <sup>-11</sup> |
| rs17660065 | 17 | 41518102 | + | T | C | C | 0.21 | -14.1 | 2.1 | 45.4 | 1.6*10 <sup>-11</sup> |
| rs17659953 | 17 | 41515544 | + | T | C | C | 0.79 | 14.1  | 2.1 | 45.4 | 1.6*10 <sup>-11</sup> |
| rs1476554  | 17 | 41514921 | + | T | C | C | 0.79 | 14.1  | 2.1 | 45.4 | 1.6*10 <sup>-11</sup> |
| rs2316954  | 17 | 41511986 | + | A | G | G | 0.79 | 14.1  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs17659881 | 17 | 41513416 | + | A | G | G | 0.21 | -14.1 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2696575  | 17 | 41584601 | + | A | G | G | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs1918790  | 17 | 41584396 | + | T | C | C | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs1918792  | 17 | 41584306 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2696576  | 17 | 41584547 | + | A | G | G | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532303  | 17 | 41585141 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs1918791  | 17 | 41584386 | + | G | C | C | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532302  | 17 | 41585192 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs17660017 | 17 | 41516493 | + | G | C | C | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2696573  | 17 | 41586424 | + | T | C | C | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532297  | 17 | 41587103 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2696572  | 17 | 41587394 | + | A | T | T | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532298  | 17 | 41587072 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532296  | 17 | 41587604 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2109092  | 17 | 41588736 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs17662235 | 17 | 41589553 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs17585214 | 17 | 41589588 | + | T | C | C | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs1406068  | 17 | 41590303 | + | T | C | C | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs1528072  | 17 | 41592502 | + | A | C | C | 0.79 | 14.3  | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532292  | 17 | 41592845 | + | A | T | T | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2696571  | 17 | 41593149 | + | G | C | C | 0.21 | -14.3 | 2.1 | 45.3 | 1.7*10 <sup>-11</sup> |
| rs2532291  | 17 | 41594201 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.2 | 1.8*10 <sup>-11</sup> |
| rs2532290  | 17 | 41594267 | + | A | G | G | 0.79 | 14.3  | 2.1 | 45.1 | 1.8*10 <sup>-11</sup> |



|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2696557  | 17 | 41702995 | + | A | C | C | 0.79 | 14.5  | 2.2 | 45.1 | 1.8*10 <sup>-11</sup> |
| rs17573593 | 17 | 41438440 | + | A | C | C | 0.21 | -14.1 | 2.1 | 45.1 | 1.9*10 <sup>-11</sup> |
| rs17662403 | 17 | 41594715 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.1 | 1.9*10 <sup>-11</sup> |
| rs8070723  | 17 | 41436901 | + | A | G | G | 0.21 | -14.1 | 2.1 | 45.1 | 1.9*10 <sup>-11</sup> |
| rs17654016 | 17 | 41493743 | + | T | C | C | 0.23 | -14.2 | 2.1 | 45.1 | 1.9*10 <sup>-11</sup> |
| rs1078268  | 17 | 41431738 | + | A | G | G | 0.21 | -14.1 | 2.1 | 45.1 | 1.9*10 <sup>-11</sup> |
| rs17585426 | 17 | 41594743 | + | T | C | C | 0.21 | -14.3 | 2.1 | 45.1 | 1.9*10 <sup>-11</sup> |
| rs3946526  | 17 | 40897439 | + | T | C | C | 0.83 | 15.2  | 2.3 | 45.0 | 1.9*10 <sup>-11</sup> |
| rs2532288  | 17 | 41595735 | + | T | C | C | 0.79 | 14.3  | 2.1 | 45.0 | 2.0*10 <sup>-11</sup> |
| rs2532282  | 17 | 41600673 | + | G | C | C | 0.79 | 14.6  | 2.2 | 45.0 | 2.0*10 <sup>-11</sup> |
| rs2532281  | 17 | 41600948 | + | T | G | G | 0.79 | 14.6  | 2.2 | 45.0 | 2.0*10 <sup>-11</sup> |
| rs2532280  | 17 | 41601136 | + | A | G | G | 0.79 | 14.6  | 2.2 | 45.0 | 2.0*10 <sup>-11</sup> |
| rs2532277  | 17 | 41602304 | + | T | C | C | 0.21 | -14.6 | 2.2 | 45.0 | 2.0*10 <sup>-11</sup> |
| rs17652337 | 17 | 41439160 | + | T | C | C | 0.77 | 14.2  | 2.1 | 44.9 | 2.0*10 <sup>-11</sup> |
| rs2532269  | 17 | 41605885 | + | T | C | C | 0.21 | -14.6 | 2.2 | 44.9 | 2.0*10 <sup>-11</sup> |
| rs1918789  | 17 | 41595884 | + | T | C | C | 0.21 | -14.3 | 2.1 | 44.9 | 2.0*10 <sup>-11</sup> |
| rs2532268  | 17 | 41606250 | + | G | C | C | 0.21 | -14.6 | 2.2 | 44.9 | 2.0*10 <sup>-11</sup> |
| rs1052553  | 17 | 41429726 | + | A | G | G | 0.21 | -14.1 | 2.1 | 44.9 | 2.1*10 <sup>-11</sup> |
| rs2532253  | 17 | 41612073 | + | A | G | G | 0.79 | 14.6  | 2.2 | 44.9 | 2.1*10 <sup>-11</sup> |
| rs2732585  | 17 | 41615316 | + | A | C | C | 0.21 | -14.6 | 2.2 | 44.8 | 2.1*10 <sup>-11</sup> |
| rs2696689  | 17 | 41652925 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.8 | 2.1*10 <sup>-11</sup> |
| rs1534456  | 17 | 41588767 | + | T | C | C | 0.21 | -14.5 | 2.2 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs1528074  | 17 | 41589837 | + | A | G | G | 0.21 | -14.5 | 2.2 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2141299  | 17 | 41596763 | + | A | C | C | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2696567  | 17 | 41597081 | + | G | C | C | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532286  | 17 | 41597441 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs4792843  | 17 | 41598956 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs17585608 | 17 | 41599756 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs4608377  | 17 | 41469206 | + | T | C | C | 0.22 | -14.1 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2696684  | 17 | 41600174 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs17585644 | 17 | 41600358 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2696657  | 17 | 41600703 | + | T | G | G | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2696660  | 17 | 41601988 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532278  | 17 | 41602182 | + | A | C | C | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532276  | 17 | 41602401 | + | A | C | C | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532275  | 17 | 41602774 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532273  | 17 | 41603091 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2696709  | 17 | 41621254 | + | G | C | C | 0.21 | -14.5 | 2.2 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532271  | 17 | 41603819 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs1881194  | 17 | 41604591 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs1881193  | 17 | 41604546 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2696662  | 17 | 41605398 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs2532270  | 17 | 41605577 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.8 | 2.2*10 <sup>-11</sup> |
| rs17573175 | 17 | 41426926 | + | G | C | C | 0.79 | 14.0  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2532267  | 17 | 41606393 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs10445338 | 17 | 41423519 | + | A | G | G | 0.79 | 14.0  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs956329   | 17 | 41607007 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2732643  | 17 | 41607684 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2696666  | 17 | 41607749 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2532259  | 17 | 41609141 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2532264  | 17 | 41608193 | + | G | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs17651754 | 17 | 41423383 | + | T | C | C | 0.21 | -14.0 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2732646  | 17 | 41610156 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2732645  | 17 | 41610068 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2732647  | 17 | 41610190 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2077606  | 17 | 40885076 | + | A | G | G | 0.83 | 15.0  | 2.3 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2532256  | 17 | 41610794 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2532257  | 17 | 41610271 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2532255  | 17 | 41611309 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2696696  | 17 | 41611554 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs740708   | 17 | 41612432 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs1881195  | 17 | 41613250 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs740706   | 17 | 41614131 | + | G | C | C | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2732712  | 17 | 41704709 | + | T | G | G | 0.21 | -14.4 | 2.2 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs758523   | 17 | 41614199 | + | T | G | G | 0.79 | 14.2  | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs12150012 | 17 | 41615296 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.7 | 2.3*10 <sup>-11</sup> |
| rs2696541  | 17 | 41707520 | + | A | G | G | 0.79 | 14.4  | 2.1 | 44.7 | 2.4*10 <sup>-11</sup> |
| rs2696446  | 17 | 41634438 | + | A | G | G | 0.79 | 14.5  | 2.2 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2696545  | 17 | 41706864 | + | T | C | C | 0.21 | -14.4 | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs10445337 | 17 | 41423237 | + | T | C | C | 0.21 | -14.0 | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2696701  | 17 | 41615696 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs17631303 | 17 | 40872185 | + | A | G | G | 0.17 | -15.0 | 2.2 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2696702  | 17 | 41616193 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2696704  | 17 | 41617530 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2532246  | 17 | 41618195 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs11012    | 17 | 40869224 | + | T | C | C | 0.83 | 15.0  | 2.2 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs9730     | 17 | 40869334 | + | G | C | C | 0.83 | 15.0  | 2.2 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2158257  | 17 | 41460189 | + | A | C | C | 0.20 | -14.7 | 2.2 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2696555  | 17 | 41704147 | + | A | G | G | 0.21 | -14.4 | 2.2 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs17651700 | 17 | 41422471 | + | G | C | C | 0.79 | 14.0  | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs17663351 | 17 | 41619700 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.6 | 2.4*10 <sup>-11</sup> |
| rs2696706  | 17 | 41619822 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.6 | 2.5*10 <sup>-11</sup> |
| rs2668617  | 17 | 41707062 | + | A | G | G | 0.21 | -14.4 | 2.1 | 44.6 | 2.5*10 <sup>-11</sup> |
| rs919464   | 17 | 41421738 | + | T | C | C | 0.79 | 14.0  | 2.1 | 44.6 | 2.5*10 <sup>-11</sup> |
| rs2696707  | 17 | 41620494 | + | A | C | C | 0.21 | -14.2 | 2.1 | 44.6 | 2.5*10 <sup>-11</sup> |
| rs2732707  | 17 | 41707377 | + | T | C | C | 0.79 | 14.3  | 2.1 | 44.6 | 2.5*10 <sup>-11</sup> |
| rs2696708  | 17 | 41620720 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.6 | 2.5*10 <sup>-11</sup> |
| rs2732589  | 17 | 41621799 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs2732706  | 17 | 41707463 | + | T | C | C | 0.79 | 14.3  | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs2696526  | 17 | 41623640 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs10445371 | 17 | 41421247 | + | A | G | G | 0.79 | 14.0  | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs2732596  | 17 | 41625323 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs2532234  | 17 | 41628043 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17663792 | 17 | 41628329 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs2732660  | 17 | 41628456 | + | G | C | C | 0.21 | -14.2 | 2.1 | 44.5 | 2.5*10 <sup>-11</sup> |
| rs1529535  | 17 | 41420596 | + | A | C | C | 0.21 | -14.0 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs11079718 | 17 | 41195723 | + | A | T | T | 0.23 | -13.9 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs2696438  | 17 | 41628705 | + | A | C | C | 0.79 | 14.2  | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs11079719 | 17 | 41195778 | + | T | G | G | 0.23 | -13.9 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs2696440  | 17 | 41630337 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs17572893 | 17 | 41420045 | + | A | G | G | 0.79 | 14.0  | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs1815     | 17 | 41632355 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs1816     | 17 | 41632395 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs2696443  | 17 | 41632598 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs17572851 | 17 | 41419603 | + | A | G | G | 0.21 | -14.0 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs2532229  | 17 | 41633042 | + | A | C | C | 0.21 | -14.2 | 2.1 | 44.5 | 2.6*10 <sup>-11</sup> |
| rs2732651  | 17 | 41700840 | + | T | C | C | 0.80 | 14.8  | 2.2 | 44.4 | 2.6*10 <sup>-11</sup> |
| rs2668719  | 17 | 41700867 | + | A | C | C | 0.80 | 14.8  | 2.2 | 44.4 | 2.6*10 <sup>-11</sup> |
| rs2732665  | 17 | 41633468 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.4 | 2.6*10 <sup>-11</sup> |
| rs17572823 | 17 | 41419400 | + | T | C | C | 0.21 | -14.0 | 2.1 | 44.4 | 2.6*10 <sup>-11</sup> |
| rs17664048 | 17 | 41634519 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs1358438  | 17 | 41635537 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs17572795 | 17 | 41419230 | + | A | G | G | 0.79 | 14.0  | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs1358437  | 17 | 41635580 | + | T | G | G | 0.21 | -14.2 | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs2732675  | 17 | 41635965 | + | A | T | T | 0.79 | 14.2  | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs2668659  | 17 | 41637229 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs2732674  | 17 | 41636474 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs2696455  | 17 | 41639348 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs2668653  | 17 | 41643933 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs2732628  | 17 | 41644061 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.4 | 2.7*10 <sup>-11</sup> |
| rs1529534  | 17 | 41418977 | + | A | G | G | 0.21 | -14.0 | 2.1 | 44.3 | 2.7*10 <sup>-11</sup> |
| rs2532418  | 17 | 41644356 | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.3 | 2.7*10 <sup>-11</sup> |
| rs2732630  | 17 | 41644927 | + | A | C | C | 0.21 | -14.2 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2668645  | 17 | 41644417 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2532417  | 17 | 41644997 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2732631  | 17 | 41645009 | + | T | G | G | 0.79 | 14.2  | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2732629  | 17 | 41644878 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2532416  | 17 | 41645068 | + | A | C | C | 0.21 | -14.2 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2668665  | 17 | 41645824 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs17651549 | 17 | 41417115 | + | T | C | C | 0.79 | 14.0  | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2732606  | 17 | 41647142 | + | T | C | C | 0.79 | 14.2  | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2732605  | 17 | 41647158 | + | A | G | G | 0.21 | -14.2 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs2668692  | 17 | 41648797 | + | A | G | G | 0.79 | 14.2  | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs17760631 | 17 | 41098828 | + | T | C | C | 0.22 | -14.0 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs241041   | 17 | 41069708 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.3 | 2.8*10 <sup>-11</sup> |
| rs17652121 | 17 | 41429810 | + | T | C | C | 0.16 | -17.5 | 2.6 | 44.3 | 2.9*10 <sup>-11</sup> |
| rs418891   | 17 | 41049321 | + | T | G | G | 0.79 | 14.0  | 2.1 | 44.3 | 2.9*10 <sup>-11</sup> |
| rs2458216  | 17 | 41702739 | + | T | C | C | 0.80 | 14.8  | 2.2 | 44.3 | 2.9*10 <sup>-11</sup> |
| rs383241   | 17 | 41061139 | + | A | G | G | 0.79 | 14.0  | 2.1 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs7222389  | 17 | 40857225 | + | T | C | C | 0.17 | -14.9 | 2.2 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs17662889 | 17 | 41604873 | + | A | C | C | 0.21 | -14.4 | 2.2 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs12942666 | 17 | 40855622 | + | A | G | G | 0.17 | -14.9 | 2.2 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs436667   | 17 | 41065198 | + | T | C | C | 0.79 | 14.0  | 2.1 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs2942169  | 17 | 41067322 | + | G | C | C | 0.21 | -14.0 | 2.1 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs2950693  | 17 | 41704133 | + | A | T | T | 0.80 | 14.8  | 2.2 | 44.2 | 2.9*10 <sup>-11</sup> |
| rs17651483 | 17 | 41414698 | + | A | C | C | 0.79 | 13.9  | 2.1 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs17687534 | 17 | 41105362 | + | T | C | C | 0.22 | -13.9 | 2.1 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs12150515 | 17 | 41446522 | + | T | G | G | 0.81 | 15.9  | 2.4 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs2532335  | 17 | 41702874 | + | A | G | G | 0.20 | -14.8 | 2.2 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs17687571 | 17 | 41105793 | + | A | G | G | 0.78 | 13.9  | 2.1 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs17687625 | 17 | 41106021 | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs17687667 | 17 | 41109882 | + | A | G | G | 0.78 | 13.9  | 2.1 | 44.2 | 3.0*10 <sup>-11</sup> |
| rs17760577 | 17 | 41097235 | + | T | C | C | 0.78 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs241021   | 17 | 41094410 | + | T | G | G | 0.21 | -13.9 | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs241020   | 17 | 41094459 | + | A | C | C | 0.79 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2950694  | 17 | 41704075 | + | A | G | G | 0.20 | -14.8 | 2.2 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs2532332  | 17 | 41703504 | + | A | T | T | 0.20 | -14.8 | 2.2 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs17572627 | 17 | 41414466 | + | A | T | T | 0.79 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs740705   | 17 | 41614223 | + | A | G | G | 0.21 | -14.4 | 2.2 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs241022   | 17 | 41093513 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs241039   | 17 | 41070456 | + | A | T | T | 0.21 | -13.9 | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs3418     | 17 | 41079245 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs12947718 | 17 | 40848884 | + | A | G | G | 0.83 | 14.9  | 2.2 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs413917   | 17 | 41078972 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs455028   | 17 | 41082357 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs2942168  | 17 | 41070633 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs366858   | 17 | 41082371 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.1 | 3.1*10 <sup>-11</sup> |
| rs17687740 | 17 | 41112159 | + | G | C | C | 0.22 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs757502   | 17 | 41112289 | + | T | C | C | 0.78 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs2942167  | 17 | 41070801 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs757501   | 17 | 41112468 | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs757500   | 17 | 41112616 | + | A | C | C | 0.78 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs448830   | 17 | 41080995 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs393152   | 17 | 41074926 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs413778   | 17 | 41072668 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs389217   | 17 | 41072914 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs17761046 | 17 | 41114165 | + | T | C | C | 0.22 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs17760733 | 17 | 41102059 | + | T | G | G | 0.78 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs2696531  | 17 | 41711411 | + | G | C | C | 0.79 | 14.3  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs17687504 | 17 | 41102504 | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs439558   | 17 | 41073586 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs17687462 | 17 | 41100773 | + | T | C | C | 0.78 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs434428   | 17 | 41081467 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.1 | 3.2*10 <sup>-11</sup> |
| rs385691   | 17 | 41081908 | + | A | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs17687838 | 17 | 41114831 | + | T | C | C | 0.22 | -13.9 | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs17687849 | 17 | 41115502 | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2696530  | 17 | 41711491 | + | A | G | G | 0.21 | -14.3 | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs449501   | 17 | 41080338 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs241023   | 17 | 41092823 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs453997   | 17 | 41082844 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs424243   | 17 | 41083670 | + | A | T | T | 0.21 | -13.9 | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs17761100 | 17 | 41116172 | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.0 | 3.2*10 <sup>-11</sup> |
| rs422112   | 17 | 41083920 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs2696525  | 17 | 41712414 | + | T | C | C | 0.79 | 14.3  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs2158474  | 17 | 41117722 | + | G | C | C | 0.22 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs2049515  | 17 | 41117639 | + | T | C | C | 0.78 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs1526129  | 17 | 41135440 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17761207 | 17 | 41118038 | + | T | C | C | 0.22 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17689104 | 17 | 41138275 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs968028   | 17 | 41136888 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17688922 | 17 | 41135134 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs968027   | 17 | 41137033 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs241031   | 17 | 41090087 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17688944 | 17 | 41135202 | + | A | T | T | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17688002 | 17 | 41118377 | + | A | T | T | 0.22 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17572613 | 17 | 41413841 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs241035   | 17 | 41087679 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17762308 | 17 | 41136731 | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs241036   | 17 | 41087502 | + | A | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs647483   | 17 | 41085215 | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs241027   | 17 | 41091261 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs241026   | 17 | 41091338 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs241033   | 17 | 41089766 | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs2040846  | 17 | 41118629 | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17588637 | 17 | 41713074 | + | T | G | G | 0.79 | 14.3  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17762361 | 17 | 41137561 | + | A | G | G | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs4486953  | 17 | 41118790 | + | T | C | C | 0.22 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |

|            |    |           |   |   |   |   |      |       |     |      |                       |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17665188 | 17 | 41713128  | + | T | C | C | 0.21 | -14.2 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17688032 | 17 | 41118985  | + | A | G | G | 0.78 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs2942164  | 17 | 41077066  | + | G | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17688056 | 17 | 41119024  | + | T | C | C | 0.78 | 13.9  | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17688068 | 17 | 41119718  | + | A | G | G | 0.22 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs17689116 | 17 | 41138341  | + | T | C | C | 0.21 | -13.9 | 2.1 | 44.0 | 3.3*10 <sup>-11</sup> |
| rs2696425  | 17 | 41022689  | + | G | C | C | 0.22 | -14.0 | 2.1 | 44.0 | 3.4*10 <sup>-11</sup> |
| rs17689182 | 17 | 41139356  | + | T | C | C | 0.79 | 13.9  | 2.1 | 44.0 | 3.4*10 <sup>-11</sup> |
| rs1918788  | 17 | 41623394  | + | A | G | G | 0.21 | -14.4 | 2.2 | 44.0 | 3.4*10 <sup>-11</sup> |
| rs17688090 | 17 | 41120770  | + | A | G | G | 0.78 | 13.9  | 2.1 | 44.0 | 3.4*10 <sup>-11</sup> |
| rs1981998  | 17 | 41412669  | + | A | G | G | 0.79 | 13.9  | 2.1 | 44.0 | 3.4*10 <sup>-11</sup> |
| rs17761387 | 17 | 41121233  | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs4273712  | 6  | 127006203 | + | A | G | G | 0.27 | 12.2  | 1.8 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs1981997  | 17 | 41412603  | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs2532235  | 17 | 41627777  | + | A | G | G | 0.79 | 14.4  | 2.2 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs17688205 | 17 | 41122135  | + | G | C | C | 0.22 | -13.9 | 2.1 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs17761985 | 17 | 41132570  | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs17691610 | 17 | 41326456  | + | T | G | G | 0.79 | 13.9  | 2.1 | 43.9 | 3.4*10 <sup>-11</sup> |
| rs17770343 | 17 | 41325948  | + | T | C | C | 0.21 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688452 | 17 | 41128868  | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs1048343  | 17 | 41629666  | + | T | C | C | 0.79 | 14.4  | 2.2 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150464 | 17 | 41132154  | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs2082068  | 17 | 41335767  | + | T | C | C | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs1984937  | 17 | 41336326  | + | A | C | C | 0.21 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17691508 | 17 | 41324257  | + | G | C | C | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688434 | 17 | 41128323  | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs2099151  | 17 | 41335618  | + | A | T | T | 0.21 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688410 | 17 | 41128034  | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs1560310  | 17 | 41334330  | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17770296 | 17 | 41324930  | + | T | C | C | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs1048333  | 17 | 41629696  | + | A | G | G | 0.21 | -14.4 | 2.2 | 43.9 | 3.5*10 <sup>-11</sup> |



|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17770337 | 17 | 41325573 | + | T | G | G | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17691556 | 17 | 41324962 | + | A | T | T | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs2040845  | 17 | 41122971 | + | G | C | C | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688296 | 17 | 41123598 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17691449 | 17 | 41320074 | + | G | C | C | 0.21 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688391 | 17 | 41127892 | + | A | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17691466 | 17 | 41324013 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17770150 | 17 | 41319954 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150610 | 17 | 41131262 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17770186 | 17 | 41319982 | + | A | C | C | 0.79 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150454 | 17 | 41131844 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17761838 | 17 | 41130742 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150141 | 17 | 41130928 | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs10491143 | 17 | 41129031 | + | A | T | T | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs10491144 | 17 | 41128907 | + | A | C | C | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688534 | 17 | 41129660 | + | A | T | T | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs17688682 | 17 | 41131712 | + | G | C | C | 0.78 | 13.9  | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150547 | 17 | 41131329 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150229 | 17 | 41371275 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.9 | 3.5*10 <sup>-11</sup> |
| rs12150230 | 17 | 41371293 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.8 | 3.5*10 <sup>-11</sup> |
| rs2019822  | 17 | 41315709 | + | A | T | T | 0.79 | 13.9  | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs2532228  | 17 | 41633595 | + | A | G | G | 0.21 | -14.4 | 2.2 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17688767 | 17 | 41133325 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17688773 | 17 | 41133493 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17762073 | 17 | 41133528 | + | A | C | C | 0.78 | 13.9  | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17688875 | 17 | 41134189 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17691328 | 17 | 41311278 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs4441322  | 17 | 41310821 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17572495 | 17 | 41410432 | + | T | G | G | 0.21 | -13.9 | 2.1 | 43.8 | 3.6*10 <sup>-11</sup> |
| rs17572467 | 17 | 41410224 | + | T | C | C | 0.21 | -13.9 | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17564020 | 17 | 41347609 | + | T | G | G | 0.79 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17770120 | 17 | 41319734 | + | A | C | C | 0.79 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17649518 | 17 | 41350214 | + | A | C | C | 0.79 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17770108 | 17 | 41317083 | + | T | G | G | 0.79 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs916793   | 17 | 41310477 | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs2217394  | 17 | 41409284 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs754512   | 17 | 41411483 | + | A | T | T | 0.21 | -13.9 | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17563965 | 17 | 41346747 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17649571 | 17 | 41350780 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17572361 | 17 | 41407845 | + | T | C | C | 0.21 | -13.9 | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17651285 | 17 | 41410073 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17651243 | 17 | 41408120 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs2532419  | 17 | 41644058 | + | T | C | C | 0.79 | 14.4  | 2.2 | 43.8 | 3.7*10 <sup>-11</sup> |
| rs17652036 | 17 | 41428864 | + | A | G | G | 0.79 | 14.2  | 2.1 | 43.7 | 3.7*10 <sup>-11</sup> |
| rs17762165 | 17 | 41134385 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.7 | 3.7*10 <sup>-11</sup> |
| rs17651213 | 17 | 41407760 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.7*10 <sup>-11</sup> |
| rs10491140 | 17 | 41306766 | + | T | G | G | 0.78 | 13.9  | 2.1 | 43.7 | 3.7*10 <sup>-11</sup> |
| rs1800547  | 17 | 41407682 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.7 | 3.7*10 <sup>-11</sup> |
| rs17572248 | 17 | 41405703 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17572169 | 17 | 41401810 | + | T | C | C | 0.79 | 13.9  | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17651134 | 17 | 41406176 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17572147 | 17 | 41400821 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17651093 | 17 | 41405386 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17650973 | 17 | 41400056 | + | A | T | T | 0.21 | -13.9 | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs12150683 | 17 | 41180619 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs2158072  | 17 | 41305985 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs2106784  | 17 | 41305682 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17564153 | 17 | 41350926 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs2668691  | 17 | 41649323 | + | T | C | C | 0.79 | 14.4  | 2.2 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs1078830  | 17 | 41301901 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.7 | 3.8*10 <sup>-11</sup> |
| rs17650901 | 17 | 41395527 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs12150672 | 17 | 41182408 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17334894 | 17 | 41182980 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs12150455 | 17 | 41183279 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs12150451 | 17 | 41183202 | + | A | G | G | 0.21 | -13.9 | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs12150195 | 17 | 41370092 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs11079717 | 17 | 41191123 | + | T | C | C | 0.21 | -13.9 | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs17426195 | 17 | 41188138 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs11079716 | 17 | 41190645 | + | A | G | G | 0.79 | 13.9  | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs17762535 | 17 | 41142913 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.7 | 3.9*10 <sup>-11</sup> |
| rs17563433 | 17 | 41156134 | + | A | C | C | 0.22 | -13.9 | 2.1 | 43.6 | 3.9*10 <sup>-11</sup> |
| rs17649019 | 17 | 41157376 | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.6 | 3.9*10 <sup>-11</sup> |
| rs1105571  | 17 | 41148983 | + | A | T | T | 0.22 | -13.9 | 2.1 | 43.6 | 3.9*10 <sup>-11</sup> |
| rs1880750  | 17 | 41152324 | + | A | T | T | 0.78 | 13.9  | 2.1 | 43.6 | 3.9*10 <sup>-11</sup> |
| rs17563501 | 17 | 41157478 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.6 | 3.9*10 <sup>-11</sup> |
| rs12150576 | 17 | 41371453 | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.6 | 4.1*10 <sup>-11</sup> |
| rs11079721 | 17 | 41195879 | + | A | C | C | 0.79 | 13.9  | 2.1 | 43.6 | 4.1*10 <sup>-11</sup> |
| rs11079723 | 17 | 41197497 | + | T | C | C | 0.21 | -13.9 | 2.1 | 43.6 | 4.1*10 <sup>-11</sup> |
| rs17689218 | 17 | 41141591 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.6 | 4.1*10 <sup>-11</sup> |
| rs17650063 | 17 | 41358383 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.1*10 <sup>-11</sup> |
| rs12150604 | 17 | 41183992 | + | A | T | T | 0.79 | 13.9  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17564223 | 17 | 41353348 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17649641 | 17 | 41353200 | + | T | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs2732711  | 17 | 41706070 | + | A | G | G | 0.20 | -14.7 | 2.2 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs8078495  | 17 | 41356438 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17649700 | 17 | 41353729 | + | G | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs767057   | 17 | 41354650 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17649866 | 17 | 41356742 | + | T | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs767056   | 17 | 41354738 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs1467969  | 17 | 41354156 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs1467970  | 17 | 41354402 | + | T | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs7501759  | 17 | 41365749 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs767059   | 17 | 41354928 | + | G | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17564493 | 17 | 41357207 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17334944 | 17 | 41184388 | + | A | G | G | 0.79 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17564780 | 17 | 41361241 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs2316782  | 17 | 41365868 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17649954 | 17 | 41357489 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17649918 | 17 | 41357449 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17564619 | 17 | 41357966 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17426064 | 17 | 41184469 | + | T | C | C | 0.79 | 13.8  | 2.1 | 43.5 | 4.2*10 <sup>-11</sup> |
| rs17650381 | 17 | 41368853 | + | T | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs2316783  | 17 | 41365946 | + | G | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs8079501  | 17 | 41356062 | + | A | T | T | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs17650417 | 17 | 41368932 | + | T | G | G | 0.78 | 13.8  | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs17564871 | 17 | 41366846 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs767058   | 17 | 41354595 | + | T | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs17564983 | 17 | 41367654 | + | A | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs17426174 | 17 | 41186709 | + | G | C | C | 0.21 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs17565025 | 17 | 41368292 | + | T | C | C | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs17650335 | 17 | 41368172 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs1864325  | 17 | 41333623 | + | T | C | C | 0.79 | 14.0  | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs12150111 | 17 | 41369767 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs12150235 | 17 | 41371574 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs12150460 | 17 | 41369966 | + | T | G | G | 0.78 | 13.8  | 2.1 | 43.5 | 4.3*10 <sup>-11</sup> |
| rs2959945  | 17 | 40931011 | + | T | C | C | 0.21 | -14.1 | 2.1 | 43.4 | 4.5*10 <sup>-11</sup> |
| rs11079724 | 17 | 41197680 | + | T | C | C | 0.79 | 13.8  | 2.1 | 43.4 | 4.5*10 <sup>-11</sup> |
| rs12150104 | 17 | 41371758 | + | A | G | G | 0.78 | 13.9  | 2.1 | 43.4 | 4.5*10 <sup>-11</sup> |
| rs12150242 | 17 | 41371645 | + | A | G | G | 0.22 | -13.9 | 2.1 | 43.4 | 4.5*10 <sup>-11</sup> |
| rs17650872 | 17 | 41395352 | + | T | G | G | 0.78 | 13.9  | 2.1 | 43.4 | 4.5*10 <sup>-11</sup> |
| rs2463519  | 17 | 41012678 | + | A | G | G | 0.80 | 14.8  | 2.2 | 43.3 | 4.6*10 <sup>-11</sup> |
| rs17650860 | 17 | 41394844 | + | A | G | G | 0.78 | 14.0  | 2.1 | 43.3 | 4.6*10 <sup>-11</sup> |
| rs17650842 | 17 | 41393329 | + | A | G | G | 0.22 | -14.0 | 2.1 | 43.3 | 4.7*10 <sup>-11</sup> |
| rs1724411  | 17 | 41025714 | + | T | C | C | 0.22 | -13.9 | 2.1 | 43.3 | 4.7*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs17650818 | 17 | 41392625 | + | T | C | C | 0.22 | -14.0 | 2.1 | 43.3 | 4.7*10 <sup>-11</sup> |
| rs17571857 | 17 | 41391544 | + | A | G | G | 0.22 | -14.0 | 2.1 | 43.3 | 4.7*10 <sup>-11</sup> |
| rs17571809 | 17 | 41390697 | + | A | G | G | 0.22 | -14.0 | 2.1 | 43.3 | 4.8*10 <sup>-11</sup> |
| rs17571718 | 17 | 41388634 | + | T | C | C | 0.22 | -14.0 | 2.1 | 43.2 | 4.8*10 <sup>-11</sup> |
| rs17571781 | 17 | 41389668 | + | T | C | C | 0.22 | -14.0 | 2.1 | 43.2 | 4.8*10 <sup>-11</sup> |
| rs17571739 | 17 | 41388781 | + | T | C | C | 0.22 | -14.0 | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs12150516 | 17 | 41300308 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563800 | 17 | 41173230 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563787 | 17 | 41169023 | + | G | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs1526126  | 17 | 41167989 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563827 | 17 | 41173993 | + | A | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs4617909  | 17 | 41162234 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs4471726  | 17 | 41162917 | + | T | C | C | 0.22 | -13.8 | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs4401083  | 17 | 41161798 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs1880752  | 17 | 41162047 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs2902662  | 17 | 41162708 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs1526125  | 17 | 41167948 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs2864087  | 17 | 41162846 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563599 | 17 | 41163726 | + | A | C | C | 0.22 | -13.8 | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563718 | 17 | 41167444 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563861 | 17 | 41174677 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.2 | 4.9*10 <sup>-11</sup> |
| rs17563889 | 17 | 41174717 | + | A | T | T | 0.22 | -13.8 | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs17649138 | 17 | 41163838 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs17649162 | 17 | 41166142 | + | G | C | C | 0.22 | -13.8 | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs4390635  | 17 | 41164787 | + | T | C | C | 0.78 | 13.8  | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs17563683 | 17 | 41166843 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs17563923 | 17 | 41175221 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs17334797 | 17 | 41181683 | + | A | G | G | 0.22 | -13.8 | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs12150658 | 17 | 41182076 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.2 | 5.0*10 <sup>-11</sup> |
| rs2532324  | 17 | 41713538 | + | A | C | C | 0.80 | 14.6  | 2.2 | 43.2 | 5.1*10 <sup>-11</sup> |
| rs17650651 | 17 | 41386171 | + | T | G | G | 0.22 | -13.9 | 2.1 | 43.1 | 5.2*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs10445370 | 17 | 41290907 | + | A | G | G | 0.78 | 13.8  | 2.1 | 43.1 | 5.3*10 <sup>-11</sup> |
| rs10445335 | 17 | 41290685 | + | A | T | T | 0.78 | 13.8  | 2.1 | 43.1 | 5.3*10 <sup>-11</sup> |
| rs242559   | 17 | 41381748 | + | A | C | C | 0.23 | -13.9 | 2.1 | 43.0 | 5.4*10 <sup>-11</sup> |
| rs10445368 | 17 | 41288959 | + | T | C | C | 0.78 | 13.9  | 2.1 | 43.0 | 5.5*10 <sup>-11</sup> |
| rs2950692  | 17 | 41704164 | + | A | G | G | 0.20 | -14.3 | 2.2 | 43.0 | 5.6*10 <sup>-11</sup> |
| rs17650633 | 17 | 41386091 | + | T | C | C | 0.22 | -13.9 | 2.1 | 42.9 | 5.7*10 <sup>-11</sup> |
| rs2696537  | 17 | 41708398 | + | A | G | G | 0.20 | -14.6 | 2.2 | 42.9 | 5.8*10 <sup>-11</sup> |
| rs17650579 | 17 | 41385975 | + | T | C | C | 0.78 | 13.9  | 2.1 | 42.9 | 5.9*10 <sup>-11</sup> |
| rs2316784  | 17 | 41377560 | + | T | G | G | 0.78 | 13.9  | 2.1 | 42.8 | 5.9*10 <sup>-11</sup> |
| rs4327091  | 17 | 41377578 | + | A | G | G | 0.78 | 13.9  | 2.1 | 42.8 | 5.9*10 <sup>-11</sup> |
| rs17650597 | 17 | 41386055 | + | A | T | T | 0.22 | -13.9 | 2.1 | 42.8 | 6.0*10 <sup>-11</sup> |
| rs4074462  | 17 | 41210994 | + | T | G | G | 0.79 | 13.7  | 2.1 | 42.8 | 6.1*10 <sup>-11</sup> |
| rs241030   | 17 | 41090286 | + | A | G | G | 0.22 | -13.7 | 2.1 | 42.8 | 6.2*10 <sup>-11</sup> |
| rs8072451  | 17 | 41249496 | + | T | C | C | 0.79 | 13.7  | 2.1 | 42.8 | 6.2*10 <sup>-11</sup> |
| rs17762769 | 17 | 41249183 | + | A | G | G | 0.79 | 13.7  | 2.1 | 42.8 | 6.2*10 <sup>-11</sup> |
| rs17689471 | 17 | 41248753 | + | T | C | C | 0.21 | -13.7 | 2.1 | 42.8 | 6.2*10 <sup>-11</sup> |
| rs413844   | 17 | 41085167 | + | A | G | G | 0.78 | 13.7  | 2.1 | 42.8 | 6.2*10 <sup>-11</sup> |
| rs1526128  | 17 | 41135407 | + | T | C | C | 0.79 | 13.8  | 2.1 | 42.7 | 6.2*10 <sup>-11</sup> |
| rs17761124 | 17 | 41116299 | + | A | T | T | 0.21 | -14.3 | 2.2 | 42.7 | 6.2*10 <sup>-11</sup> |
| rs17563986 | 17 | 41347100 | + | A | G | G | 0.21 | -13.9 | 2.1 | 42.6 | 6.7*10 <sup>-11</sup> |
| rs2668624  | 17 | 41708649 | + | A | G | G | 0.20 | -14.1 | 2.2 | 42.5 | 7.1*10 <sup>-11</sup> |
| rs17689824 | 17 | 41260178 | + | T | C | C | 0.79 | 13.7  | 2.1 | 42.5 | 7.1*10 <sup>-11</sup> |
| rs17763086 | 17 | 41261262 | + | T | G | G | 0.21 | -13.7 | 2.1 | 42.5 | 7.1*10 <sup>-11</sup> |
| rs1396862  | 17 | 41258778 | + | A | G | G | 0.79 | 13.7  | 2.1 | 42.5 | 7.1*10 <sup>-11</sup> |
| rs17689882 | 17 | 41262609 | + | A | G | G | 0.79 | 13.7  | 2.1 | 42.5 | 7.1*10 <sup>-11</sup> |
| rs1912151  | 17 | 41258725 | + | T | C | C | 0.79 | 13.7  | 2.1 | 42.5 | 7.2*10 <sup>-11</sup> |
| rs2668626  | 17 | 41708952 | + | T | C | C | 0.20 | -14.4 | 2.2 | 42.5 | 7.2*10 <sup>-11</sup> |
| rs1876831  | 17 | 41263526 | + | T | C | C | 0.79 | 13.7  | 2.1 | 42.5 | 7.2*10 <sup>-11</sup> |
| rs17689653 | 17 | 41254744 | + | A | T | T | 0.21 | -13.7 | 2.1 | 42.4 | 7.3*10 <sup>-11</sup> |
| rs2668625  | 17 | 41708747 | + | A | C | C | 0.80 | 14.1  | 2.2 | 42.4 | 7.3*10 <sup>-11</sup> |
| rs16940665 | 17 | 41263677 | + | T | C | C | 0.21 | -13.7 | 2.1 | 42.4 | 7.3*10 <sup>-11</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs2732702  | 17 | 41709505 | + | T | G | G | 0.20 | -14.1 | 2.2 | 42.4 | 7.3*10 <sup>-11</sup> |
| rs2668628  | 17 | 41709662 | + | A | G | G | 0.80 | 14.1  | 2.2 | 42.4 | 7.4*10 <sup>-11</sup> |
| rs2732701  | 17 | 41709880 | + | A | G | G | 0.20 | -14.1 | 2.2 | 42.4 | 7.4*10 <sup>-11</sup> |
| rs2668627  | 17 | 41709470 | + | T | C | C | 0.20 | -14.1 | 2.2 | 42.4 | 7.4*10 <sup>-11</sup> |
| rs17689918 | 17 | 41265869 | + | A | G | G | 0.79 | 13.7  | 2.1 | 42.4 | 7.4*10 <sup>-11</sup> |
| rs2261201  | 17 | 41710326 | + | G | C | C | 0.80 | 14.1  | 2.2 | 42.4 | 7.5*10 <sup>-11</sup> |
| rs17650771 | 17 | 41391205 | + | A | G | G | 0.21 | -14.3 | 2.2 | 42.4 | 7.6*10 <sup>-11</sup> |
| rs16940674 | 17 | 41266288 | + | T | C | C | 0.79 | 13.7  | 2.1 | 42.4 | 7.6*10 <sup>-11</sup> |
| rs4277389  | 17 | 41251434 | + | A | G | G | 0.21 | -13.7 | 2.1 | 42.3 | 7.7*10 <sup>-11</sup> |
| rs1876829  | 17 | 41267224 | + | T | C | C | 0.21 | -13.7 | 2.1 | 42.3 | 7.7*10 <sup>-11</sup> |
| rs878886   | 17 | 41268271 | + | G | C | C | 0.79 | 13.7  | 2.1 | 42.3 | 7.8*10 <sup>-11</sup> |
| rs2873269  | 17 | 41286902 | + | T | C | C | 0.78 | 13.7  | 2.1 | 42.2 | 8.2*10 <sup>-11</sup> |
| rs4640231  | 17 | 41268567 | + | G | C | C | 0.21 | -13.6 | 2.1 | 42.2 | 8.3*10 <sup>-11</sup> |
| rs10445364 | 17 | 41272136 | + | A | G | G | 0.79 | 13.6  | 2.1 | 42.2 | 8.3*10 <sup>-11</sup> |
| rs17763533 | 17 | 41273970 | + | T | C | C | 0.21 | -13.6 | 2.1 | 42.2 | 8.4*10 <sup>-11</sup> |
| rs17690314 | 17 | 41275664 | + | T | G | G | 0.21 | -13.6 | 2.1 | 42.2 | 8.4*10 <sup>-11</sup> |
| rs17690326 | 17 | 41276754 | + | T | C | C | 0.21 | -13.6 | 2.1 | 42.1 | 8.6*10 <sup>-11</sup> |
| rs241044   | 17 | 41068247 | + | A | G | G | 0.80 | 14.6  | 2.2 | 42.1 | 8.7*10 <sup>-11</sup> |
| rs885639   | 17 | 41284394 | + | T | G | G | 0.21 | -13.6 | 2.1 | 42.0 | 9.3*10 <sup>-11</sup> |
| rs17769490 | 17 | 41281385 | + | A | G | G | 0.79 | 13.5  | 2.1 | 42.0 | 9.3*10 <sup>-11</sup> |
| rs17690679 | 17 | 41280583 | + | A | G | G | 0.21 | -13.5 | 2.1 | 41.9 | 9.5*10 <sup>-11</sup> |
| rs17690661 | 17 | 41280301 | + | A | G | G | 0.79 | 13.5  | 2.1 | 41.9 | 9.7*10 <sup>-11</sup> |
| rs17763596 | 17 | 41276990 | + | T | G | G | 0.79 | 13.6  | 2.1 | 41.8 | 1.0*10 <sup>-10</sup> |
| rs17763634 | 17 | 41277534 | + | T | C | C | 0.21 | -13.6 | 2.1 | 41.8 | 1.0*10 <sup>-10</sup> |
| rs12373168 | 17 | 41280117 | + | A | C | C | 0.21 | -13.5 | 2.1 | 41.8 | 1.0*10 <sup>-10</sup> |
| rs12185233 | 17 | 41279434 | + | G | C | C | 0.21 | -13.5 | 2.1 | 41.8 | 1.0*10 <sup>-10</sup> |
| rs12185235 | 17 | 41279483 | + | T | C | C | 0.79 | 13.5  | 2.1 | 41.8 | 1.0*10 <sup>-10</sup> |
| rs12373142 | 17 | 41279980 | + | G | C | C | 0.79 | 13.5  | 2.1 | 41.7 | 1.0*10 <sup>-10</sup> |
| rs11079725 | 17 | 41279714 | + | T | C | C | 0.21 | -13.5 | 2.1 | 41.7 | 1.1*10 <sup>-10</sup> |
| rs12373123 | 17 | 41279853 | + | T | C | C | 0.21 | -13.5 | 2.1 | 41.7 | 1.1*10 <sup>-10</sup> |
| rs2696700  | 17 | 41615569 | + | A | G | G | 0.80 | 14.9  | 2.3 | 41.7 | 1.1*10 <sup>-10</sup> |

|            |    |          |   |   |   |   |      |       |     |      |                       |
|------------|----|----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs10514879 | 17 | 41158754 | + | T | C | C | 0.78 | 13.6  | 2.1 | 41.6 | 1.1*10 <sup>-10</sup> |
| rs10514903 | 17 | 41562424 | + | G | C | C | 0.81 | 15.3  | 2.4 | 41.4 | 1.2*10 <sup>-10</sup> |
| rs916888   | 17 | 42218292 | + | T | C | C | 0.23 | -13.9 | 2.2 | 41.4 | 1.3*10 <sup>-10</sup> |
| rs199504   | 17 | 42216164 | + | T | C | C | 0.20 | -13.9 | 2.2 | 41.2 | 1.4*10 <sup>-10</sup> |
| rs70602    | 17 | 42214876 | + | T | C | C | 0.80 | 13.9  | 2.2 | 41.2 | 1.4*10 <sup>-10</sup> |
| rs199505   | 17 | 42214571 | + | A | G | G | 0.80 | 13.9  | 2.2 | 41.1 | 1.4*10 <sup>-10</sup> |
| rs415430   | 17 | 42214305 | + | T | C | C | 0.20 | -13.9 | 2.2 | 41.1 | 1.4*10 <sup>-10</sup> |
| rs199506   | 17 | 42214192 | + | A | G | G | 0.80 | 13.9  | 2.2 | 41.1 | 1.4*10 <sup>-10</sup> |
| rs199507   | 17 | 42214016 | + | A | G | G | 0.80 | 13.9  | 2.2 | 41.1 | 1.5*10 <sup>-10</sup> |
| rs17769552 | 17 | 41283070 | + | A | G | G | 0.79 | 13.6  | 2.1 | 41.1 | 1.5*10 <sup>-10</sup> |
| rs878887   | 17 | 41268363 | + | T | C | C | 0.79 | 13.7  | 2.1 | 41.0 | 1.5*10 <sup>-10</sup> |
| rs199509   | 17 | 42213889 | + | A | G | G | 0.20 | -13.8 | 2.2 | 40.8 | 1.6*10 <sup>-10</sup> |
| rs199528   | 17 | 42198305 | + | T | C | C | 0.80 | 13.7  | 2.2 | 40.8 | 1.7*10 <sup>-10</sup> |
| rs2055794  | 17 | 41307507 | + | A | G | G | 0.81 | 14.9  | 2.3 | 40.8 | 1.7*10 <sup>-10</sup> |
| rs199513   | 17 | 42212095 | + | A | G | G | 0.80 | 13.7  | 2.2 | 40.8 | 1.7*10 <sup>-10</sup> |
| rs199514   | 17 | 42212044 | + | A | G | G | 0.20 | -13.7 | 2.2 | 40.7 | 1.7*10 <sup>-10</sup> |
| rs199516   | 17 | 42211648 | + | T | C | C | 0.20 | -13.7 | 2.2 | 40.7 | 1.7*10 <sup>-10</sup> |
| rs199515   | 17 | 42211804 | + | G | C | C | 0.80 | 13.7  | 2.1 | 40.7 | 1.8*10 <sup>-10</sup> |
| rs2696501  | 17 | 41719662 | + | T | G | G | 0.80 | 13.6  | 2.1 | 40.6 | 1.8*10 <sup>-10</sup> |
| rs2732615  | 17 | 41719833 | + | T | C | C | 0.20 | -13.6 | 2.1 | 40.6 | 1.8*10 <sup>-10</sup> |
| rs2732613  | 17 | 41720606 | + | A | C | C | 0.20 | -13.6 | 2.1 | 40.6 | 1.9*10 <sup>-10</sup> |
| rs2532426  | 17 | 41724181 | + | T | C | C | 0.80 | 13.6  | 2.1 | 40.5 | 1.9*10 <sup>-10</sup> |
| rs538628   | 17 | 42142496 | + | G | C | C | 0.20 | -13.5 | 2.1 | 40.3 | 2.2*10 <sup>-10</sup> |
| rs199439   | 17 | 42148686 | + | A | G | G | 0.20 | -13.5 | 2.1 | 40.2 | 2.3*10 <sup>-10</sup> |
| rs17688916 | 17 | 41134463 | + | A | T | T | 0.81 | 14.4  | 2.3 | 40.1 | 2.4*10 <sup>-10</sup> |
| rs199456   | 17 | 42153103 | + | T | C | C | 0.80 | 13.5  | 2.1 | 40.0 | 2.5*10 <sup>-10</sup> |
| rs17650991 | 17 | 41400344 | + | A | C | C | 0.23 | -13.3 | 2.1 | 39.7 | 2.9*10 <sup>-10</sup> |
| rs199534   | 17 | 42179380 | + | T | G | G | 0.20 | -13.4 | 2.1 | 39.4 | 3.4*10 <sup>-10</sup> |
| rs199533   | 17 | 42184098 | + | A | G | G | 0.80 | 13.4  | 2.1 | 39.3 | 3.7*10 <sup>-10</sup> |
| rs11079720 | 17 | 41195788 | + | A | G | G | 0.81 | 14.9  | 2.4 | 39.1 | 4.0*10 <sup>-10</sup> |
| rs199448   | 17 | 42164185 | + | A | G | G | 0.20 | -13.3 | 2.1 | 39.1 | 4.1*10 <sup>-10</sup> |



|            |    |           |   |   |   |   |      |       |     |      |                       |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|-----------------------|
| rs199445   | 17 | 42172573  | + | T | C | C | 0.80 | 13.3  | 2.1 | 39.0 | 4.2*10 <sup>-10</sup> |
| rs199443   | 17 | 42174733  | + | T | C | C | 0.80 | 13.3  | 2.1 | 39.0 | 4.3*10 <sup>-10</sup> |
| rs17573607 | 17 | 41438918  | + | A | G | G | 0.83 | 16.1  | 2.6 | 39.0 | 4.3*10 <sup>-10</sup> |
| rs199535   | 17 | 42177829  | + | A | G | G | 0.20 | -13.3 | 2.1 | 38.6 | 5.1*10 <sup>-10</sup> |
| rs17762954 | 17 | 41255567  | + | T | C | C | 0.81 | 14.7  | 2.4 | 38.2 | 6.5*10 <sup>-10</sup> |
| rs2668711  | 17 | 41697404  | + | T | G | G | 0.91 | 24.8  | 4.0 | 38.1 | 6.7*10 <sup>-10</sup> |
| rs7207373  | 17 | 41126495  | + | T | C | C | 0.77 | 12.5  | 2.0 | 37.8 | 7.8*10 <sup>-10</sup> |
| rs6503443  | 17 | 41121664  | + | T | C | C | 0.23 | -12.5 | 2.0 | 37.8 | 8.0*10 <sup>-10</sup> |
| rs16941038 | 17 | 41117348  | + | T | C | C | 0.23 | -12.5 | 2.0 | 37.7 | 8.1*10 <sup>-10</sup> |
| rs16941035 | 17 | 41117302  | + | T | G | G | 0.23 | -12.5 | 2.0 | 37.7 | 8.1*10 <sup>-10</sup> |
| rs7215239  | 17 | 41123556  | + | T | C | C | 0.23 | -12.5 | 2.0 | 37.7 | 8.2*10 <sup>-10</sup> |
| rs1724401  | 17 | 41111640  | + | A | C | C | 0.23 | -12.4 | 2.0 | 37.5 | 9.0*10 <sup>-10</sup> |
| rs1635291  | 17 | 41107696  | + | A | G | G | 0.23 | -12.4 | 2.0 | 37.5 | 9.1*10 <sup>-10</sup> |
| rs1724400  | 17 | 41111654  | + | A | C | C | 0.77 | 12.4  | 2.0 | 37.4 | 9.4*10 <sup>-10</sup> |
| rs1630095  | 17 | 41105955  | + | A | G | G | 0.23 | -12.4 | 2.0 | 37.3 | 9.9*10 <sup>-10</sup> |
| rs2532329  | 17 | 41705867  | + | A | G | G | 0.81 | 15.0  | 2.5 | 37.3 | 9.9*10 <sup>-10</sup> |
| rs1635298  | 17 | 41100127  | + | A | T | T | 0.23 | -12.4 | 2.1 | 36.2 | 1.8*10 <sup>-9</sup>  |
| rs2074404  | 17 | 42220599  | + | T | G | G | 0.23 | -12.6 | 2.1 | 35.9 | 2.1*10 <sup>-9</sup>  |
| rs9388490  | 6  | 126746488 | + | T | C | C | 0.59 | -10.0 | 1.7 | 35.8 | 2.2*10 <sup>-9</sup>  |
| rs12373124 | 17 | 41279999  | + | T | C | C | 0.24 | -12.0 | 2.0 | 34.3 | 4.8*10 <sup>-9</sup>  |
| rs919461   | 17 | 41421506  | + | A | T | T | 0.19 | -14.7 | 2.5 | 33.9 | 5.7*10 <sup>-9</sup>  |
| rs440778   | 17 | 41042203  | + | A | G | G | 0.19 | -14.1 | 2.4 | 33.5 | 7.0*10 <sup>-9</sup>  |
| rs199501   | 17 | 42217772  | + | A | G | G | 0.78 | 12.1  | 2.1 | 33.3 | 7.7*10 <sup>-9</sup>  |
| rs7224296  | 17 | 42155230  | + | A | G | G | 0.26 | -11.4 | 2.0 | 33.0 | 9.4*10 <sup>-9</sup>  |
| rs199524   | 17 | 42203606  | + | T | G | G | 0.22 | -11.9 | 2.1 | 32.9 | 9.9*10 <sup>-9</sup>  |
| rs199520   | 17 | 42209035  | + | A | G | G | 0.22 | -11.9 | 2.1 | 32.8 | 1.0*10 <sup>-8</sup>  |
| rs439945   | 17 | 41082442  | + | A | C | C | 0.74 | 11.3  | 2.0 | 32.0 | 1.5*10 <sup>-8</sup>  |
| rs1724409  | 17 | 41096348  | + | T | G | G | 0.26 | -11.2 | 2.0 | 31.9 | 1.6*10 <sup>-8</sup>  |
| rs417968   | 17 | 41084159  | + | A | G | G | 0.26 | -11.2 | 2.0 | 31.9 | 1.6*10 <sup>-8</sup>  |
| rs199438   | 17 | 42146826  | + | A | G | G | 0.78 | 11.5  | 2.0 | 31.9 | 1.6*10 <sup>-8</sup>  |
| rs183211   | 17 | 42143493  | + | A | G | G | 0.78 | 11.5  | 2.0 | 31.8 | 1.7*10 <sup>-8</sup>  |

|            |    |           |   |   |   |   |      |       |     |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|----------------------|
| rs142167   | 17 | 42150418  | + | A | G | G | 0.22 | -11.5 | 2.0 | 31.8 | 1.7*10 <sup>-8</sup> |
| rs199436   | 17 | 42144468  | + | A | G | G | 0.22 | -11.4 | 2.0 | 31.7 | 1.8*10 <sup>-8</sup> |
| rs199455   | 17 | 42154400  | + | T | C | C | 0.22 | -11.5 | 2.0 | 31.7 | 1.8*10 <sup>-8</sup> |
| rs199529   | 17 | 42192384  | + | A | C | C | 0.22 | -11.5 | 2.0 | 31.7 | 1.8*10 <sup>-8</sup> |
| rs199530   | 17 | 42191820  | + | A | G | G | 0.22 | -11.5 | 2.0 | 31.6 | 1.9*10 <sup>-8</sup> |
| rs199454   | 17 | 42155294  | + | A | G | G | 0.22 | -11.4 | 2.0 | 31.6 | 1.9*10 <sup>-8</sup> |
| rs199452   | 17 | 42156524  | + | T | C | C | 0.78 | 11.4  | 2.0 | 31.6 | 1.9*10 <sup>-8</sup> |
| rs199449   | 17 | 42164086  | + | A | G | G | 0.78 | 11.3  | 2.0 | 30.9 | 2.7*10 <sup>-8</sup> |
| rs199442   | 17 | 42175290  | + | A | G | G | 0.78 | 11.3  | 2.0 | 30.8 | 2.9*10 <sup>-8</sup> |
| rs199536   | 17 | 42175593  | + | T | C | C | 0.78 | 11.3  | 2.0 | 30.8 | 2.9*10 <sup>-8</sup> |
| rs199500   | 17 | 42218572  | + | T | C | C | 0.73 | 11.7  | 2.1 | 30.0 | 4.2*10 <sup>-8</sup> |
| rs1575676  | 6  | 108967957 | + | T | C | C | 0.64 | 9.6   | 1.8 | 28.5 | 9.3*10 <sup>-8</sup> |
| rs2696558  | 17 | 41702728  | + | A | T | T | 0.68 | 10.4  | 2.0 | 27.6 | 1.5*10 <sup>-7</sup> |
| rs2022464  | 6  | 109052063 | + | A | C | C | 0.70 | 9.5   | 1.8 | 27.5 | 1.6*10 <sup>-7</sup> |
| rs10457180 | 6  | 109071732 | + | A | G | G | 0.29 | -9.4  | 1.8 | 27.2 | 1.9*10 <sup>-7</sup> |
| rs13217795 | 6  | 109080791 | + | T | C | C | 0.29 | -9.4  | 1.8 | 26.9 | 2.1*10 <sup>-7</sup> |
| rs1490384  | 6  | 126892853 | + | T | C | C | 0.50 | -8.5  | 1.6 | 26.8 | 2.3*10 <sup>-7</sup> |
| rs1155939  | 6  | 126907826 | + | A | C | C | 0.50 | -8.4  | 1.6 | 26.5 | 2.6*10 <sup>-7</sup> |
| rs1155938  | 6  | 126908165 | + | A | C | C | 0.50 | -8.4  | 1.6 | 26.5 | 2.6*10 <sup>-7</sup> |
| rs9400239  | 6  | 109084356 | + | T | C | C | 0.71 | 9.3   | 1.8 | 26.4 | 2.7*10 <sup>-7</sup> |
| rs692942   | 10 | 89807916  | + | A | C | C | 0.83 | 11.2  | 2.2 | 25.9 | 3.6*10 <sup>-7</sup> |
| rs1538170  | 6  | 126794567 | + | T | C | C | 0.57 | -8.7  | 1.7 | 25.9 | 3.6*10 <sup>-7</sup> |
| rs664317   | 10 | 89802210  | + | A | C | C | 0.83 | 11.1  | 2.2 | 25.6 | 4.3*10 <sup>-7</sup> |
| rs1358071  | 17 | 41158972  | + | A | C | C | 0.27 | -9.8  | 1.9 | 25.5 | 4.3*10 <sup>-7</sup> |
| rs4565329  | 6  | 126794491 | + | T | C | C | 0.55 | -8.2  | 1.6 | 25.3 | 4.9*10 <sup>-7</sup> |
| rs1538172  | 6  | 126790186 | + | A | G | G | 0.45 | 8.2   | 1.6 | 25.3 | 4.9*10 <sup>-7</sup> |
| rs17690703 | 17 | 41281077  | + | T | C | C | 0.75 | 9.9   | 2.0 | 25.3 | 4.9*10 <sup>-7</sup> |
| rs1538171  | 6  | 126794577 | + | G | C | C | 0.55 | -8.2  | 1.6 | 25.3 | 4.9*10 <sup>-7</sup> |
| rs4897181  | 6  | 126795257 | + | T | C | C | 0.55 | -8.2  | 1.6 | 25.3 | 4.9*10 <sup>-7</sup> |
| rs9321065  | 6  | 126785780 | + | A | G | G | 0.55 | -8.2  | 1.6 | 25.3 | 4.9*10 <sup>-7</sup> |
| rs9401882  | 6  | 126796748 | + | A | G | G | 0.45 | 8.2   | 1.6 | 25.3 | 5.0*10 <sup>-7</sup> |

|            |   |           |   |   |   |   |      |      |     |      |                      |
|------------|---|-----------|---|---|---|---|------|------|-----|------|----------------------|
| rs1361108  | 6 | 126809293 | + | T | C | C | 0.55 | -8.4 | 1.7 | 25.3 | 5.0*10 <sup>-7</sup> |
| rs4897182  | 6 | 126797335 | + | T | G | G | 0.45 | 8.2  | 1.6 | 25.3 | 5.0*10 <sup>-7</sup> |
| rs9398808  | 6 | 126800484 | + | T | G | G | 0.55 | -8.2 | 1.6 | 25.2 | 5.1*10 <sup>-7</sup> |
| rs9375439  | 6 | 126800233 | + | G | C | C | 0.55 | -8.2 | 1.6 | 25.2 | 5.2*10 <sup>-7</sup> |
| rs9385399  | 6 | 126800726 | + | T | G | G | 0.55 | -8.2 | 1.6 | 25.2 | 5.2*10 <sup>-7</sup> |
| rs1415671  | 6 | 126801280 | + | T | G | G | 0.45 | 8.2  | 1.6 | 25.2 | 5.3*10 <sup>-7</sup> |
| rs9384679  | 6 | 108971112 | + | T | C | C | 0.63 | 8.5  | 1.7 | 25.1 | 5.3*10 <sup>-7</sup> |
| rs2184968  | 6 | 126802687 | + | T | C | C | 0.45 | 8.2  | 1.6 | 25.1 | 5.4*10 <sup>-7</sup> |
| rs2152876  | 6 | 126802921 | + | A | G | G | 0.55 | -8.2 | 1.6 | 25.1 | 5.5*10 <sup>-7</sup> |
| rs9385400  | 6 | 126805883 | + | T | G | G | 0.45 | 8.2  | 1.6 | 25.0 | 5.7*10 <sup>-7</sup> |
| rs1361107  | 6 | 126809204 | + | A | C | C | 0.45 | 8.2  | 1.6 | 25.0 | 5.7*10 <sup>-7</sup> |
| rs32579    | 5 | 149191041 | + | T | C | C | 0.71 | -9.0 | 1.8 | 25.0 | 5.8*10 <sup>-7</sup> |
| rs1337735  | 6 | 126812717 | + | A | T | T | 0.55 | -8.2 | 1.6 | 25.0 | 5.8*10 <sup>-7</sup> |
| rs1361109  | 6 | 126812836 | + | T | C | C | 0.55 | -8.2 | 1.6 | 25.0 | 5.9*10 <sup>-7</sup> |
| rs2326451  | 6 | 126853621 | + | A | T | T | 0.45 | 8.2  | 1.6 | 25.0 | 5.9*10 <sup>-7</sup> |
| rs1572569  | 6 | 126813380 | + | A | G | G | 0.55 | -8.2 | 1.6 | 24.9 | 6.0*10 <sup>-7</sup> |
| rs1120786  | 6 | 126850330 | + | T | G | G | 0.45 | 8.2  | 1.6 | 24.9 | 6.1*10 <sup>-7</sup> |
| rs2184967  | 6 | 126815180 | + | T | C | C | 0.55 | -8.2 | 1.6 | 24.9 | 6.1*10 <sup>-7</sup> |
| rs4559102  | 6 | 126815273 | + | A | G | G | 0.55 | -8.2 | 1.6 | 24.9 | 6.1*10 <sup>-7</sup> |
| rs9375441  | 6 | 126820293 | + | A | G | G | 0.55 | -8.2 | 1.6 | 24.9 | 6.1*10 <sup>-7</sup> |
| rs4895808  | 6 | 126823127 | + | T | C | C | 0.55 | -8.2 | 1.6 | 24.9 | 6.1*10 <sup>-7</sup> |
| rs9388496  | 6 | 126826755 | + | A | G | G | 0.45 | 8.2  | 1.6 | 24.9 | 6.1*10 <sup>-7</sup> |
| rs6911407  | 6 | 108973724 | + | A | C | C | 0.63 | 8.5  | 1.7 | 24.9 | 6.2*10 <sup>-7</sup> |
| rs9398809  | 6 | 126830837 | + | T | C | C | 0.55 | -8.2 | 1.6 | 24.9 | 6.2*10 <sup>-7</sup> |
| rs16904016 | 8 | 91246803  | + | A | G | G | 0.97 | 23.1 | 4.6 | 24.8 | 6.3*10 <sup>-7</sup> |
| rs9372840  | 6 | 126864328 | + | A | C | C | 0.45 | 8.1  | 1.6 | 24.8 | 6.3*10 <sup>-7</sup> |
| rs1159619  | 6 | 126842837 | + | A | C | C | 0.55 | -8.2 | 1.6 | 24.8 | 6.4*10 <sup>-7</sup> |
| rs7738135  | 6 | 126871674 | + | A | G | G | 0.55 | -8.1 | 1.6 | 24.8 | 6.4*10 <sup>-7</sup> |
| rs4418209  | 6 | 126861392 | + | T | G | G | 0.45 | 8.1  | 1.6 | 24.8 | 6.5*10 <sup>-7</sup> |
| rs9375446  | 6 | 126876708 | + | A | G | G | 0.55 | -8.1 | 1.6 | 24.8 | 6.5*10 <sup>-7</sup> |
| rs9401883  | 6 | 126838804 | + | A | G | G | 0.45 | 8.1  | 1.6 | 24.8 | 6.5*10 <sup>-7</sup> |

|            |    |           |   |   |   |   |      |       |     |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|----------------------|
| rs9375442  | 6  | 126844830 | + | A | C | C | 0.45 | 8.1   | 1.6 | 24.7 | 6.5*10 <sup>-7</sup> |
| rs9398810  | 6  | 126857297 | + | A | C | C | 0.55 | -8.1  | 1.6 | 24.7 | 6.6*10 <sup>-7</sup> |
| rs2050644  | 6  | 126846948 | + | A | G | G | 0.45 | 8.1   | 1.6 | 24.7 | 6.6*10 <sup>-7</sup> |
| rs1490388  | 6  | 126877348 | + | T | C | C | 0.55 | -8.1  | 1.6 | 24.7 | 6.6*10 <sup>-7</sup> |
| rs1907067  | 6  | 126879356 | + | A | C | C | 0.45 | 8.1   | 1.6 | 24.7 | 6.9*10 <sup>-7</sup> |
| rs7001425  | 8  | 91244283  | + | A | G | G | 0.03 | -22.4 | 4.5 | 24.6 | 7.1*10 <sup>-7</sup> |
| rs4380768  | 6  | 126909044 | + | G | C | C | 0.49 | 8.1   | 1.6 | 24.6 | 7.1*10 <sup>-7</sup> |
| rs1591805  | 6  | 126758757 | + | A | G | G | 0.49 | 8.4   | 1.7 | 24.5 | 7.4*10 <sup>-7</sup> |
| rs756466   | 6  | 127464266 | + | T | C | C | 0.66 | -8.9  | 1.8 | 24.4 | 7.6*10 <sup>-7</sup> |
| rs6921183  | 6  | 126910722 | + | A | T | T | 0.49 | 8.0   | 1.6 | 24.4 | 7.8*10 <sup>-7</sup> |
| rs1844593  | 6  | 126939520 | + | A | G | G | 0.51 | -8.0  | 1.6 | 24.4 | 7.9*10 <sup>-7</sup> |
| rs2802288  | 6  | 109002908 | + | A | G | G | 0.63 | 8.3   | 1.7 | 24.3 | 8.2*10 <sup>-7</sup> |
| rs9388489  | 6  | 126740412 | + | A | G | G | 0.44 | 8.1   | 1.6 | 24.3 | 8.3*10 <sup>-7</sup> |
| rs9375447  | 6  | 126915784 | + | A | G | G | 0.49 | 8.0   | 1.6 | 24.3 | 8.3*10 <sup>-7</sup> |
| rs9375435  | 6  | 126703551 | + | T | C | C | 0.55 | -8.3  | 1.7 | 24.3 | 8.5*10 <sup>-7</sup> |
| rs9388500  | 6  | 126918273 | + | G | C | C | 0.51 | -8.0  | 1.6 | 24.2 | 8.5*10 <sup>-7</sup> |
| rs9401888  | 6  | 126919216 | + | A | G | G | 0.49 | 8.0   | 1.6 | 24.2 | 8.6*10 <sup>-7</sup> |
| rs9398171  | 6  | 109090220 | + | T | C | C | 0.29 | -8.9  | 1.8 | 24.2 | 8.6*10 <sup>-7</sup> |
| rs6907898  | 6  | 126708109 | + | T | C | C | 0.56 | -8.2  | 1.7 | 24.2 | 8.6*10 <sup>-7</sup> |
| rs572474   | 10 | 89781634  | + | A | G | G | 0.17 | -10.6 | 2.2 | 24.2 | 8.7*10 <sup>-7</sup> |
| rs2490272  | 6  | 109002079 | + | T | C | C | 0.37 | -8.3  | 1.7 | 24.2 | 8.7*10 <sup>-7</sup> |
| rs17754780 | 6  | 126706026 | + | T | C | C | 0.56 | -8.2  | 1.7 | 24.2 | 8.7*10 <sup>-7</sup> |
| rs2802292  | 6  | 109015211 | + | T | G | G | 0.37 | -8.3  | 1.7 | 24.2 | 8.7*10 <sup>-7</sup> |
| rs1387916  | 6  | 126928424 | + | G | C | C | 0.49 | 8.0   | 1.6 | 24.2 | 8.9*10 <sup>-7</sup> |
| rs4629706  | 6  | 126930024 | + | A | T | T | 0.49 | 8.0   | 1.6 | 24.1 | 9.0*10 <sup>-7</sup> |
| rs2802290  | 6  | 109012373 | + | A | G | G | 0.37 | -8.3  | 1.7 | 24.1 | 9.1*10 <sup>-7</sup> |
| rs10504891 | 8  | 91240392  | + | A | G | G | 0.97 | 21.9  | 4.5 | 24.1 | 9.3*10 <sup>-7</sup> |
| rs768023   | 6  | 108982695 | + | A | G | G | 0.37 | -8.3  | 1.7 | 24.1 | 9.3*10 <sup>-7</sup> |
| rs9401892  | 6  | 126937061 | + | A | G | G | 0.51 | -7.9  | 1.6 | 24.1 | 9.3*10 <sup>-7</sup> |
| rs4621657  | 6  | 126937920 | + | A | G | G | 0.51 | -7.9  | 1.6 | 24.1 | 9.3*10 <sup>-7</sup> |
| rs2153960  | 6  | 109094877 | + | A | G | G | 0.29 | -8.8  | 1.8 | 24.0 | 9.4*10 <sup>-7</sup> |

|            |    |           |   |   |   |   |      |       |     |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|----------------------|
| rs3861455  | 6  | 126939662 | + | A | C | C | 0.49 | 7.9   | 1.6 | 24.0 | 9.5*10 <sup>-7</sup> |
| rs1936791  | 6  | 127463878 | + | T | C | C | 0.69 | -8.6  | 1.7 | 24.0 | 9.6*10 <sup>-7</sup> |
| rs575957   | 10 | 89781958  | + | T | C | C | 0.83 | 10.5  | 2.2 | 24.0 | 9.6*10 <sup>-7</sup> |
| rs3861456  | 6  | 126940353 | + | A | G | G | 0.49 | 7.9   | 1.6 | 24.0 | 9.7*10 <sup>-7</sup> |
| rs2253310  | 6  | 108995286 | + | G | C | C | 0.37 | -8.3  | 1.7 | 24.0 | 9.7*10 <sup>-7</sup> |
| rs4895811  | 6  | 126941546 | + | A | T | T | 0.51 | -7.9  | 1.6 | 24.0 | 9.8*10 <sup>-7</sup> |
| rs9388501  | 6  | 126944704 | + | T | C | C | 0.49 | 7.9   | 1.6 | 23.9 | 9.9*10 <sup>-7</sup> |
| rs11154383 | 6  | 127467150 | + | A | G | G | 0.31 | 8.5   | 1.7 | 23.9 | 1.0*10 <sup>-6</sup> |
| rs4946935  | 6  | 109107435 | + | A | G | G | 0.71 | 8.8   | 1.8 | 23.8 | 1.1*10 <sup>-6</sup> |
| rs134097   | 22 | 26400326  | + | A | G | G | 0.51 | -8.2  | 1.7 | 23.8 | 1.1*10 <sup>-6</sup> |
| rs564443   | 10 | 89797897  | + | A | G | G | 0.83 | 10.6  | 2.2 | 23.7 | 1.1*10 <sup>-6</sup> |
| rs7818433  | 8  | 91215901  | + | A | G | G | 0.97 | 22.1  | 4.5 | 23.7 | 1.1*10 <sup>-6</sup> |
| rs9398172  | 6  | 109101519 | + | A | G | G | 0.29 | -8.7  | 1.8 | 23.6 | 1.2*10 <sup>-6</sup> |
| rs13296683 | 9  | 11690487  | + | A | G | G | 0.69 | 8.6   | 1.8 | 23.6 | 1.2*10 <sup>-6</sup> |
| rs6997558  | 8  | 91238297  | + | A | G | G | 0.03 | -21.7 | 4.5 | 23.6 | 1.2*10 <sup>-6</sup> |
| rs16903634 | 8  | 91205649  | + | T | C | C | 0.03 | -22.4 | 4.6 | 23.6 | 1.2*10 <sup>-6</sup> |
| rs16904011 | 8  | 91236826  | + | G | C | C | 0.97 | 21.6  | 4.5 | 23.6 | 1.2*10 <sup>-6</sup> |
| rs12675530 | 8  | 91224276  | + | T | C | C | 0.97 | 21.6  | 4.4 | 23.5 | 1.2*10 <sup>-6</sup> |
| rs1936794  | 6  | 127469773 | + | T | C | C | 0.31 | 8.5   | 1.8 | 23.5 | 1.2*10 <sup>-6</sup> |
| rs3800229  | 6  | 109103656 | + | T | G | G | 0.29 | -8.7  | 1.8 | 23.5 | 1.2*10 <sup>-6</sup> |
| rs9491693  | 6  | 127470933 | + | A | G | G | 0.69 | -8.5  | 1.8 | 23.5 | 1.3*10 <sup>-6</sup> |
| rs1935952  | 6  | 109105598 | + | G | C | C | 0.71 | 8.7   | 1.8 | 23.5 | 1.3*10 <sup>-6</sup> |
| rs8067056  | 17 | 41439785  | + | T | C | C | 0.37 | -8.5  | 1.8 | 23.4 | 1.3*10 <sup>-6</sup> |
| rs1935949  | 6  | 109105980 | + | A | G | G | 0.71 | 8.7   | 1.8 | 23.4 | 1.3*10 <sup>-6</sup> |
| rs1936796  | 6  | 127471420 | + | A | G | G | 0.69 | -8.5  | 1.8 | 23.4 | 1.3*10 <sup>-6</sup> |
| rs2435200  | 17 | 41427688  | + | A | G | G | 0.60 | 8.2   | 1.7 | 23.3 | 1.4*10 <sup>-6</sup> |
| rs1936797  | 6  | 127474350 | + | A | G | G | 0.31 | 8.4   | 1.7 | 23.2 | 1.5*10 <sup>-6</sup> |
| rs1936799  | 6  | 127475831 | + | T | C | C | 0.69 | -8.4  | 1.8 | 23.1 | 1.5*10 <sup>-6</sup> |
| rs1826189  | 6  | 126963907 | + | T | C | C | 0.51 | -7.8  | 1.6 | 23.0 | 1.6*10 <sup>-6</sup> |
| rs4946936  | 6  | 109110014 | + | T | C | C | 0.71 | 8.6   | 1.8 | 22.9 | 1.7*10 <sup>-6</sup> |
| rs13346801 | 19 | 58318439  | + | G | C | C | 0.07 | 16.0  | 3.3 | 22.8 | 1.8*10 <sup>-6</sup> |

|            |    |           |   |   |   |   |      |       |     |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|----------------------|
| rs2745347  | 6  | 127463213 | + | A | C | C | 0.32 | 8.3   | 1.7 | 22.7 | 1.9*10 <sup>-6</sup> |
| rs2074405  | 17 | 42221161  | + | A | C | C | 0.80 | 16.6  | 3.5 | 22.7 | 1.9*10 <sup>-6</sup> |
| rs1936790  | 6  | 127463426 | + | T | C | C | 0.68 | -8.3  | 1.7 | 22.6 | 1.9*10 <sup>-6</sup> |
| rs853961   | 6  | 127045157 | + | T | G | G | 0.50 | 7.8   | 1.6 | 22.6 | 1.9*10 <sup>-6</sup> |
| rs7743860  | 6  | 126969410 | + | T | G | G | 0.49 | 7.7   | 1.6 | 22.6 | 2.0*10 <sup>-6</sup> |
| rs9401897  | 6  | 126982334 | + | A | G | G | 0.49 | 7.7   | 1.6 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs9491653  | 6  | 126985323 | + | A | G | G | 0.49 | 7.7   | 1.6 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs4243491  | 6  | 126980229 | + | T | C | C | 0.49 | 7.7   | 1.6 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs1936793  | 6  | 127466535 | + | T | C | C | 0.32 | 8.2   | 1.7 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs16984492 | 19 | 58315808  | + | T | G | G | 0.93 | -15.8 | 3.3 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs7259824  | 19 | 58315595  | + | A | G | G | 0.07 | 15.8  | 3.3 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs9491652  | 6  | 126985313 | + | G | C | C | 0.49 | 7.7   | 1.6 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs7259819  | 19 | 58315583  | + | A | C | C | 0.07 | 15.8  | 3.3 | 22.5 | 2.1*10 <sup>-6</sup> |
| rs2745349  | 6  | 127461527 | + | A | C | C | 0.32 | 8.2   | 1.7 | 22.5 | 2.2*10 <sup>-6</sup> |
| rs4629707  | 6  | 126979583 | + | T | C | C | 0.49 | 7.7   | 1.6 | 22.5 | 2.2*10 <sup>-6</sup> |
| rs4339479  | 6  | 126978646 | + | A | G | G | 0.51 | -7.7  | 1.6 | 22.4 | 2.2*10 <sup>-6</sup> |
| rs7738836  | 6  | 126977928 | + | A | G | G | 0.49 | 7.7   | 1.6 | 22.4 | 2.2*10 <sup>-6</sup> |
| rs1340953  | 6  | 126993441 | + | A | G | G | 0.49 | 7.7   | 1.6 | 22.4 | 2.2*10 <sup>-6</sup> |
| rs1340952  | 6  | 126993203 | + | T | C | C | 0.51 | -7.7  | 1.6 | 22.4 | 2.2*10 <sup>-6</sup> |
| rs1262476  | 6  | 127028689 | + | A | G | G | 0.75 | 9.0   | 1.9 | 22.3 | 2.3*10 <sup>-6</sup> |
| rs495149   | 10 | 89785503  | + | T | C | C | 0.83 | 10.2  | 2.2 | 22.3 | 2.3*10 <sup>-6</sup> |
| rs1417572  | 6  | 127000420 | + | T | C | C | 0.49 | 7.6   | 1.6 | 22.3 | 2.4*10 <sup>-6</sup> |
| rs4549631  | 6  | 127008001 | + | T | C | C | 0.49 | 7.6   | 1.6 | 22.2 | 2.4*10 <sup>-6</sup> |
| rs1538956  | 6  | 127005719 | + | T | G | G | 0.51 | -7.6  | 1.6 | 22.2 | 2.5*10 <sup>-6</sup> |
| rs9388507  | 6  | 127012588 | + | A | C | C | 0.51 | -7.6  | 1.6 | 22.2 | 2.5*10 <sup>-6</sup> |
| rs3905044  | 6  | 127014576 | + | A | G | G | 0.49 | 7.6   | 1.6 | 22.2 | 2.5*10 <sup>-6</sup> |
| rs6911485  | 6  | 127016808 | + | A | G | G | 0.49 | 7.6   | 1.6 | 22.2 | 2.5*10 <sup>-6</sup> |
| rs9375450  | 6  | 127027044 | + | A | G | G | 0.51 | -7.6  | 1.6 | 22.2 | 2.5*10 <sup>-6</sup> |
| rs1936795  | 6  | 127469811 | + | T | C | C | 0.32 | 8.2   | 1.7 | 22.1 | 2.6*10 <sup>-6</sup> |
| rs9388509  | 6  | 127031670 | + | A | G | G | 0.51 | -7.6  | 1.6 | 22.1 | 2.6*10 <sup>-6</sup> |
| rs621891   | 10 | 89787604  | + | T | C | C | 0.83 | 10.1  | 2.2 | 22.0 | 2.7*10 <sup>-6</sup> |

|            |    |           |   |   |   |   |      |       |     |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|----------------------|
| rs692788   | 10 | 89789593  | + | A | G | G | 0.17 | -10.1 | 2.2 | 22.0 | 2.7*10 <sup>-6</sup> |
| rs507795   | 10 | 89789803  | + | T | C | C | 0.83 | 10.1  | 2.2 | 21.9 | 2.9*10 <sup>-6</sup> |
| rs2800704  | 6  | 127473181 | + | A | G | G | 0.32 | 8.1   | 1.7 | 21.9 | 2.9*10 <sup>-6</sup> |
| rs9388487  | 6  | 126719961 | + | T | G | G | 0.55 | -7.8  | 1.7 | 21.8 | 3.1*10 <sup>-6</sup> |
| rs9398803  | 6  | 126725287 | + | A | G | G | 0.45 | 7.8   | 1.7 | 21.8 | 3.1*10 <sup>-6</sup> |
| rs7740134  | 6  | 127051362 | + | A | T | T | 0.49 | 7.6   | 1.6 | 21.7 | 3.1*10 <sup>-6</sup> |
| rs9349264  | 6  | 43927236  | + | T | G | G | 0.15 | 11.5  | 2.5 | 21.7 | 3.1*10 <sup>-6</sup> |
| rs864937   | 6  | 127056776 | + | A | G | G | 0.49 | 7.6   | 1.6 | 21.7 | 3.2*10 <sup>-6</sup> |
| rs2800703  | 6  | 127468491 | + | T | G | G | 0.35 | 8.2   | 1.8 | 21.6 | 3.4*10 <sup>-6</sup> |
| rs853985   | 6  | 127061866 | + | T | C | C | 0.49 | 7.5   | 1.6 | 21.5 | 3.5*10 <sup>-6</sup> |
| rs864938   | 6  | 127064497 | + | A | T | T | 0.51 | -7.5  | 1.6 | 21.5 | 3.6*10 <sup>-6</sup> |
| rs853986   | 6  | 127065029 | + | G | C | C | 0.49 | 7.5   | 1.6 | 21.5 | 3.6*10 <sup>-6</sup> |
| rs9369429  | 6  | 43925104  | + | T | C | C | 0.84 | -11.3 | 2.5 | 21.2 | 4.1*10 <sup>-6</sup> |
| rs17110447 | 5  | 149173039 | + | A | G | G | 0.29 | 8.3   | 1.8 | 21.2 | 4.1*10 <sup>-6</sup> |
| rs109075   | 5  | 149175116 | + | T | C | C | 0.29 | 8.3   | 1.8 | 21.2 | 4.2*10 <sup>-6</sup> |
| rs109077   | 5  | 149176875 | + | T | G | G | 0.29 | 8.3   | 1.8 | 21.0 | 4.5*10 <sup>-6</sup> |
| rs1351394  | 12 | 64638093  | + | T | C | C | 0.50 | -7.5  | 1.6 | 21.0 | 4.7*10 <sup>-6</sup> |
| rs12202204 | 6  | 126728100 | + | A | G | G | 0.31 | -8.3  | 1.8 | 20.8 | 5.0*10 <sup>-6</sup> |
| rs10457478 | 6  | 126746627 | + | G | C | C | 0.69 | 8.2   | 1.8 | 20.8 | 5.1*10 <sup>-6</sup> |
| rs853962   | 6  | 127069343 | + | T | G | G | 0.49 | 7.4   | 1.6 | 20.8 | 5.1*10 <sup>-6</sup> |
| rs1038196  | 12 | 64629667  | + | G | C | C | 0.50 | -7.4  | 1.6 | 20.8 | 5.2*10 <sup>-6</sup> |
| rs10784502 | 12 | 64630077  | + | T | C | C | 0.50 | 7.4   | 1.6 | 20.8 | 5.2*10 <sup>-6</sup> |
| rs4460221  | 6  | 127072914 | + | A | G | G | 0.49 | 7.4   | 1.6 | 20.7 | 5.3*10 <sup>-6</sup> |
| rs12738007 | 1  | 29394292  | + | T | C | C | 0.54 | 7.5   | 1.7 | 20.7 | 5.3*10 <sup>-6</sup> |
| rs1269195  | 6  | 127073243 | + | T | C | C | 0.49 | 7.4   | 1.6 | 20.7 | 5.3*10 <sup>-6</sup> |
| rs1262543  | 6  | 127074192 | + | A | G | G | 0.49 | 7.4   | 1.6 | 20.7 | 5.4*10 <sup>-6</sup> |
| rs4654393  | 1  | 29407024  | + | A | G | G | 0.54 | 7.5   | 1.7 | 20.7 | 5.4*10 <sup>-6</sup> |
| rs853965   | 6  | 127077867 | + | T | C | C | 0.49 | 7.4   | 1.6 | 20.7 | 5.4*10 <sup>-6</sup> |
| rs13212044 | 6  | 127067354 | + | T | G | G | 0.75 | 8.7   | 1.9 | 20.6 | 5.8*10 <sup>-6</sup> |
| rs6426352  | 1  | 29343430  | + | G | C | C | 0.46 | -7.5  | 1.7 | 20.5 | 5.9*10 <sup>-6</sup> |
| rs12032470 | 1  | 29337541  | + | A | C | C | 0.54 | 7.5   | 1.7 | 20.5 | 6.0*10 <sup>-6</sup> |

|            |    |           |   |   |   |   |      |       |     |      |                      |
|------------|----|-----------|---|---|---|---|------|-------|-----|------|----------------------|
| rs16984484 | 19 | 58311532  | + | A | G | G | 0.08 | 14.4  | 3.2 | 20.5 | 6.1*10 <sup>-6</sup> |
| rs10484759 | 6  | 127078735 | + | T | C | C | 0.75 | 8.6   | 1.9 | 20.3 | 6.5*10 <sup>-6</sup> |
| rs1268175  | 6  | 109125015 | + | A | G | G | 0.34 | -7.8  | 1.7 | 20.3 | 6.8*10 <sup>-6</sup> |
| rs199497   | 17 | 42221762  | + | T | C | C | 0.19 | -12.5 | 2.8 | 20.2 | 7.1*10 <sup>-6</sup> |
| rs7225002  | 17 | 41544850  | + | A | G | G | 0.40 | -7.6  | 1.7 | 20.1 | 7.2*10 <sup>-6</sup> |
| rs1268177  | 6  | 109124015 | + | A | G | G | 0.34 | -7.8  | 1.7 | 20.1 | 7.2*10 <sup>-6</sup> |
| rs1268178  | 6  | 109123977 | + | T | G | G | 0.34 | -7.8  | 1.7 | 20.1 | 7.4*10 <sup>-6</sup> |
| rs2836950  | 21 | 39526299  | + | G | C | C | 0.65 | 8.0   | 1.8 | 20.0 | 7.5*10 <sup>-6</sup> |
| rs1268179  | 6  | 109123930 | + | G | C | C | 0.34 | -7.8  | 1.7 | 20.0 | 7.6*10 <sup>-6</sup> |
| rs7540557  | 1  | 24250531  | + | T | C | C | 0.20 | -9.4  | 2.1 | 20.0 | 7.8*10 <sup>-6</sup> |
| rs9472134  | 6  | 43917645  | + | A | T | T | 0.54 | 8.7   | 1.9 | 19.9 | 8.0*10 <sup>-6</sup> |
| rs13201802 | 6  | 43914712  | + | T | C | C | 0.85 | -13.0 | 2.9 | 19.9 | 8.2*10 <sup>-6</sup> |
| rs4654391  | 1  | 29366453  | + | T | C | C | 0.47 | -7.5  | 1.7 | 19.9 | 8.2*10 <sup>-6</sup> |
| rs7951820  | 11 | 1531644   | + | T | C | C | 0.79 | -9.0  | 2.0 | 19.9 | 8.3*10 <sup>-6</sup> |
| rs12801744 | 11 | 1449708   | + | T | C | C | 0.93 | -16.5 | 3.7 | 19.9 | 8.3*10 <sup>-6</sup> |
| rs8756     | 12 | 64646019  | + | A | C | C | 0.49 | 7.2   | 1.6 | 19.8 | 8.6*10 <sup>-6</sup> |
| rs4235745  | 5  | 149171304 | + | T | C | C | 0.67 | -7.9  | 1.8 | 19.8 | 8.7*10 <sup>-6</sup> |
| rs1042725  | 12 | 64644614  | + | T | C | C | 0.51 | 7.2   | 1.6 | 19.8 | 8.8*10 <sup>-6</sup> |
| rs10835257 | 11 | 1457787   | + | T | C | C | 0.80 | -9.2  | 2.1 | 19.7 | 8.8*10 <sup>-6</sup> |
| rs10457480 | 6  | 126854302 | + | G | C | C | 0.69 | 7.9   | 1.8 | 19.7 | 9.2*10 <sup>-6</sup> |
| rs853981   | 6  | 127087153 | + | T | C | C | 0.49 | 7.2   | 1.6 | 19.7 | 9.2*10 <sup>-6</sup> |
| rs2506085  | 1  | 24214998  | + | A | C | C | 0.21 | -9.8  | 2.2 | 19.6 | 9.5*10 <sup>-6</sup> |
| rs853980   | 6  | 127086462 | + | A | T | T | 0.49 | 7.2   | 1.6 | 19.6 | 9.7*10 <sup>-6</sup> |
| rs13311608 | 7  | 32966126  | + | A | G | G | 0.47 | -7.1  | 1.6 | 19.5 | 1.0*10 <sup>-5</sup> |



**Supplementary Table 3. Association of reported height loci with intracranial volume.**

| <b>name</b> | <b>chr</b> | <b>position</b> | <b>strand</b> | <b>allele 1</b> | <b>allele 2</b> | <b>coded allele</b> | <b>frequency coded allele</b> | <b>beta</b> | <b>standard error</b> | <b>p</b>             |
|-------------|------------|-----------------|---------------|-----------------|-----------------|---------------------|-------------------------------|-------------|-----------------------|----------------------|
| rs425277    | 1          | 2059032         | +             | T               | C               | C                   | 0.72                          | 0.14        | 1.85                  | 9.4*10 <sup>-1</sup> |
| rs2284746   | 1          | 17179262        | +             | G               | C               | C                   | 0.46                          | 3.28        | 1.66                  | 4.8*10 <sup>-2</sup> |
| rs1738475   | 1          | 23409478        | +             | G               | C               | C                   | 0.60                          | 2.52        | 1.67                  | 1.3*10 <sup>-1</sup> |
| rs4601530   | 1          | 24916698        | +             | T               | C               | C                   | 0.75                          | -0.59       | 1.85                  | 7.5*10 <sup>-1</sup> |
| rs7532866   | 1          | 26614131        | +             | A               | G               | G                   | 0.34                          | -0.26       | 1.75                  | 8.8*10 <sup>-1</sup> |
| rs2154319   | 1          | 41518357        | +             | T               | C               | C                   | 0.24                          | -0.27       | 2.02                  | 8.9*10 <sup>-1</sup> |
| rs17391694  | 1          | 78396214        | +             | T               | C               | C                   | 0.88                          | -3.08       | 2.92                  | 2.9*10 <sup>-1</sup> |
| rs6699417   | 1          | 88896031        | +             | T               | C               | C                   | 0.39                          | -2.42       | 1.68                  | 1.5*10 <sup>-1</sup> |
| rs10874746  | 1          | 93096559        | +             | T               | C               | C                   | 0.61                          | 1.77        | 1.67                  | 2.9*10 <sup>-1</sup> |
| rs9428104   | 1          | 118657110       | +             | A               | G               | G                   | 0.75                          | -3.29       | 1.91                  | 8.4*10 <sup>-2</sup> |
| rs11205277  | 1          | 148159496       | +             | A               | G               | G                   | 0.43                          | -1.35       | 1.75                  | 4.4*10 <sup>-1</sup> |
| rs17346452  | 1          | 170319910       | +             | T               | C               | C                   | 0.28                          | 1.19        | 1.82                  | 5.1*10 <sup>-1</sup> |
| rs1325598   | 1          | 175058872       | +             | A               | G               | G                   | 0.57                          | 0.99        | 1.65                  | 5.5*10 <sup>-1</sup> |
| rs1046934   | 1          | 182290152       | +             | A               | C               | C                   | 0.36                          | -0.64       | 1.70                  | 7.1*10 <sup>-1</sup> |
| rs10863936  | 1          | 210304421       | +             | A               | G               | G                   | 0.47                          | 1.79        | 1.62                  | 2.7*10 <sup>-1</sup> |
| rs6684205   | 1          | 216676325       | +             | A               | G               | G                   | 0.27                          | 1.27        | 1.82                  | 4.9*10 <sup>-1</sup> |
| rs11118346  | 1          | 217810342       | +             | T               | C               | C                   | 0.54                          | 1.33        | 1.64                  | 4.2*10 <sup>-1</sup> |
| rs10799445  | 1          | 225978506       | +             | A               | C               | C                   | 0.23                          | -2.91       | 1.98                  | 1.4*10 <sup>-1</sup> |
| rs4665736   | 2          | 25041103        | +             | T               | C               | C                   | 0.47                          | -3.36       | 1.66                  | 4.3*10 <sup>-2</sup> |
| rs6714546   | 2          | 33214929        | +             | A               | G               | G                   | 0.73                          | -2.11       | 1.85                  | 2.5*10 <sup>-1</sup> |
| rs17511102  | 2          | 37814117        | +             | A               | T               | T                   | 0.09                          | 1.40        | 3.06                  | 6.5*10 <sup>-1</sup> |
| rs2341459   | 2          | 44621706        | +             | T               | C               | C                   | 0.74                          | 0.81        | 1.85                  | 6.6*10 <sup>-1</sup> |
| rs12474201  | 2          | 46774789        | +             | A               | G               | G                   | 0.65                          | -1.27       | 1.73                  | 4.6*10 <sup>-1</sup> |
| rs3791675   | 2          | 55964813        | +             | T               | C               | C                   | 0.78                          | 1.61        | 1.96                  | 4.1*10 <sup>-1</sup> |
| rs11684404  | 2          | 88705737        | +             | T               | C               | C                   | 0.33                          | 0.90        | 1.74                  | 6.0*10 <sup>-1</sup> |
| rs7567288   | 2          | 134151294       | +             | T               | C               | C                   | 0.19                          | 5.36        | 2.10                  | 1.1*10 <sup>-2</sup> |
| rs7567851   | 2          | 178392966       | +             | G               | C               | C                   | 0.07                          | -1.72       | 3.10                  | 5.8*10 <sup>-1</sup> |
| rs1351164   | 2          | 217980143       | +             | T               | C               | C                   | 0.20                          | -1.15       | 2.07                  | 5.8*10 <sup>-1</sup> |

|            |   |           |   |   |   |   |      |       |      |                      |
|------------|---|-----------|---|---|---|---|------|-------|------|----------------------|
| rs12470505 | 2 | 219616613 | + | T | G | G | 0.10 | 5.55  | 2.79 | 4.6*10 <sup>-2</sup> |
| rs2629046  | 2 | 224755988 | + | T | C | C | 0.45 | -0.11 | 1.63 | 9.4*10 <sup>-1</sup> |
| rs2580816  | 2 | 232506210 | + | T | C | C | 0.81 | -1.34 | 2.13 | 5.3*10 <sup>-1</sup> |
| rs12694997 | 2 | 241911659 | + | A | G | G | 0.78 | 0.04  | 1.95 | 9.8*10 <sup>-1</sup> |
| rs2597513  | 3 | 13530836  | + | T | C | C | 0.10 | 1.97  | 2.70 | 4.7*10 <sup>-1</sup> |
| rs13088462 | 3 | 51046753  | + | T | C | C | 0.06 | 1.19  | 3.71 | 7.5*10 <sup>-1</sup> |
| rs2336725  | 3 | 53093779  | + | T | C | C | 0.46 | 1.07  | 1.70 | 5.3*10 <sup>-1</sup> |
| rs9835332  | 3 | 56642722  | + | G | C | C | 0.47 | 0.94  | 1.63 | 5.7*10 <sup>-1</sup> |
| rs17806888 | 3 | 67499012  | + | T | C | C | 0.11 | 0.67  | 2.61 | 8.0*10 <sup>-1</sup> |
| rs9863706  | 3 | 72520103  | + | T | C | C | 0.78 | -0.59 | 1.96 | 7.6*10 <sup>-1</sup> |
| rs6439167  | 3 | 130533446 | + | T | C | C | 0.78 | 0.74  | 1.96 | 7.1*10 <sup>-1</sup> |
| rs9844666  | 3 | 137456906 | + | A | G | G | 0.74 | 6.62  | 1.88 | 4.3*10 <sup>-4</sup> |
| rs724016   | 3 | 142588260 | + | A | G | G | 0.46 | 5.38  | 1.63 | 9.9*10 <sup>-4</sup> |
| rs572169   | 3 | 173648421 | + | T | C | C | 0.69 | -4.46 | 1.75 | 1.1*10 <sup>-2</sup> |
| rs720390   | 3 | 187031377 | + | A | G | G | 0.62 | -0.64 | 1.69 | 7.1*10 <sup>-1</sup> |
| rs2247341  | 4 | 1671115   | + | A | G | G | 0.65 | 2.35  | 1.72 | 1.7*10 <sup>-1</sup> |
| rs6449353  | 4 | 17642586  | + | T | C | C | 0.14 | -5.27 | 2.34 | 2.5*10 <sup>-2</sup> |
| rs17081935 | 4 | 57518233  | + | T | C | C | 0.81 | -4.59 | 2.10 | 2.9*10 <sup>-2</sup> |
| rs7697556  | 4 | 73734177  | + | T | C | C | 0.53 | -1.04 | 1.68 | 5.3*10 <sup>-1</sup> |
| rs788867   | 4 | 82369030  | + | T | G | G | 0.32 | 2.62  | 1.78 | 1.4*10 <sup>-1</sup> |
| rs10010325 | 4 | 106325802 | + | A | C | C | 0.52 | 1.27  | 1.64 | 4.4*10 <sup>-1</sup> |
| rs7689420  | 4 | 145787802 | + | T | C | C | 0.84 | -3.55 | 2.24 | 1.1*10 <sup>-1</sup> |
| rs955748   | 4 | 184452669 | + | A | G | G | 0.75 | -1.70 | 1.90 | 3.7*10 <sup>-1</sup> |
| rs1173727  | 5 | 32866278  | + | T | C | C | 0.60 | 0.21  | 1.67 | 9.0*10 <sup>-1</sup> |
| rs11958779 | 5 | 55037656  | + | A | G | G | 0.31 | 0.86  | 1.76 | 6.3*10 <sup>-1</sup> |
| rs10037512 | 5 | 88390431  | + | T | C | C | 0.44 | -2.25 | 1.68 | 1.8*10 <sup>-1</sup> |
| rs13177718 | 5 | 108141243 | + | T | C | C | 0.93 | -4.70 | 3.23 | 1.5*10 <sup>-1</sup> |
| rs1582931  | 5 | 122685098 | + | A | G | G | 0.53 | 1.20  | 1.66 | 4.7*10 <sup>-1</sup> |
| rs274546   | 5 | 131727766 | + | A | G | G | 0.62 | 0.68  | 1.70 | 6.9*10 <sup>-1</sup> |
| rs526896   | 5 | 134384604 | + | T | G | G | 0.27 | -0.93 | 1.91 | 6.3*10 <sup>-1</sup> |
| rs4282339  | 5 | 168188818 | + | A | G | G | 0.80 | -0.17 | 2.04 | 9.3*10 <sup>-1</sup> |

|                  |          |                  |   |          |          |          |             |              |             |                            |
|------------------|----------|------------------|---|----------|----------|----------|-------------|--------------|-------------|----------------------------|
| rs12153391       | 5        | 171136043        | + | A        | C        | C        | 0.74        | -0.80        | 1.98        | 6.9*10 <sup>-1</sup>       |
| rs889014         | 5        | 172916720        | + | T        | C        | C        | 0.65        | -1.48        | 1.73        | 3.9*10 <sup>-1</sup>       |
| rs422421         | 5        | 176449932        | + | T        | C        | C        | 0.79        | -0.57        | 1.98        | 7.7*10 <sup>-1</sup>       |
| rs6879260        | 5        | 179663620        | + | T        | C        | C        | 0.60        | 2.00         | 1.67        | 2.3*10 <sup>-1</sup>       |
| rs3812163        | 6        | 7670759          | + | A        | T        | T        | 0.46        | -2.06        | 1.69        | 2.2*10 <sup>-1</sup>       |
| rs1047014        | 6        | 19949472         | + | T        | C        | C        | 0.25        | 2.44         | 1.97        | 2.1*10 <sup>-1</sup>       |
| rs806794         | 6        | 26308656         | + | A        | G        | G        | 0.28        | -5.44        | 1.86        | 3.3*10 <sup>-3</sup>       |
| rs3129109        | 6        | 29192211         | + | T        | C        | C        | 0.61        | 0.03         | 1.71        | 9.9*10 <sup>-1</sup>       |
| rs2256183        | 6        | 31488508         | + | A        | G        | G        | 0.53        | -0.86        | 1.65        | 6.0*10 <sup>-1</sup>       |
| rs6457620        | 6        | 32771977         | + | G        | C        | C        | 0.48        | -2.36        | 1.63        | 1.5*10 <sup>-1</sup>       |
| rs2780226        | 6        | 34307070         | + | T        | C        | C        | 0.08        | -0.38        | 3.03        | 9.0*10 <sup>-1</sup>       |
| rs6457821        | 6        | 35510783         | + | A        | C        | C        | 0.98        | 12.35        | 6.39        | 5.3*10 <sup>-2</sup>       |
| rs9472414        | 6        | 45054484         | + | A        | T        | T        | 0.80        | 1.98         | 2.04        | 3.3*10 <sup>-1</sup>       |
| rs9360921        | 6        | 76322362         | + | T        | G        | G        | 0.10        | 0.74         | 2.69        | 7.8*10 <sup>-1</sup>       |
| rs310405         | 6        | 81857081         | + | A        | G        | G        | 0.47        | -0.80        | 1.66        | 6.3*10 <sup>-1</sup>       |
| rs7759938        | 6        | 105485647        | + | T        | C        | C        | 0.32        | 1.53         | 1.78        | 3.9*10 <sup>-1</sup>       |
| rs1046943        | 6        | 109890634        | + | A        | G        | G        | 0.41        | -3.35        | 1.67        | 4.5*10 <sup>-2</sup>       |
| rs961764         | 6        | 117628849        | + | G        | C        | C        | 0.43        | -0.60        | 1.66        | 7.2*10 <sup>-1</sup>       |
| <b>rs1490384</b> | <b>6</b> | <b>126892853</b> | + | <b>T</b> | <b>C</b> | <b>C</b> | <b>0.50</b> | <b>-8.47</b> | <b>1.64</b> | <b>2.3*10<sup>-7</sup></b> |
| rs6569648        | 6        | 130390812        | + | T        | C        | C        | 0.24        | 3.14         | 1.92        | 1.0*10 <sup>-1</sup>       |
| rs7763064        | 6        | 142838982        | + | A        | G        | G        | 0.72        | -0.46        | 1.81        | 8.0*10 <sup>-1</sup>       |
| rs543650         | 6        | 152152636        | + | T        | G        | G        | 0.61        | 0.61         | 1.82        | 7.4*10 <sup>-1</sup>       |
| rs9456307        | 6        | 158849430        | + | A        | T        | T        | 0.94        | -1.37        | 3.48        | 6.9*10 <sup>-1</sup>       |
| rs798489         | 7        | 2768329          | + | T        | C        | C        | 0.73        | 1.61         | 1.87        | 3.9*10 <sup>-1</sup>       |
| rs4470914        | 7        | 19583047         | + | T        | C        | C        | 0.82        | -5.39        | 2.28        | 1.8*10 <sup>-2</sup>       |
| rs12534093       | 7        | 23469499         | + | A        | T        | T        | 0.77        | 2.85         | 1.99        | 1.5*10 <sup>-1</sup>       |
| rs1708299        | 7        | 28156471         | + | A        | G        | G        | 0.69        | 0.53         | 1.76        | 7.6*10 <sup>-1</sup>       |
| rs6959212        | 7        | 38094851         | + | T        | C        | C        | 0.67        | 0.24         | 1.74        | 8.9*10 <sup>-1</sup>       |
| rs42235          | 7        | 92086012         | + | T        | C        | C        | 0.69        | 3.45         | 1.81        | 5.7*10 <sup>-2</sup>       |
| rs822552         | 7        | 148281567        | + | G        | C        | C        | 0.75        | 1.41         | 2.06        | 5.0*10 <sup>-1</sup>       |
| rs2110001        | 7        | 150147955        | + | G        | C        | C        | 0.71        | 0.54         | 1.92        | 7.8*10 <sup>-1</sup>       |

|            |    |           |   |   |   |   |      |        |      |                      |
|------------|----|-----------|---|---|---|---|------|--------|------|----------------------|
| rs1013209  | 8  | 24172249  | + | T | C | C | 0.76 | 1.38   | 1.94 | 4.8*10 <sup>-1</sup> |
| rs7460090  | 8  | 57356717  | + | T | C | C | 0.11 | -4.21  | 2.61 | 1.1*10 <sup>-1</sup> |
| rs6473015  | 8  | 78341040  | + | A | C | C | 0.29 | 0.15   | 1.80 | 9.3*10 <sup>-1</sup> |
| rs6470764  | 8  | 130794847 | + | T | C | C | 0.80 | 1.48   | 2.09 | 4.8*10 <sup>-1</sup> |
| rs12680655 | 8  | 135706519 | + | G | C | C | 0.62 | 0.34   | 1.69 | 8.4*10 <sup>-1</sup> |
| rs7864648  | 9  | 16358732  | + | T | G | G | 0.68 | -2.57  | 1.84 | 1.6*10 <sup>-1</sup> |
| rs11144688 | 9  | 77732106  | + | A | G | G | 0.90 | -1.00  | 4.04 | 8.0*10 <sup>-1</sup> |
| rs7853377  | 9  | 85742025  | + | A | G | G | 0.23 | 0.74   | 1.96 | 7.0*10 <sup>-1</sup> |
| rs8181166  | 9  | 88306448  | + | G | C | C | 0.52 | 0.08   | 1.68 | 9.6*10 <sup>-1</sup> |
| rs2778031  | 9  | 90025546  | + | T | C | C | 0.76 | -1.29  | 1.88 | 4.9*10 <sup>-1</sup> |
| rs9969804  | 9  | 94468941  | + | A | C | C | 0.57 | -3.29  | 1.66 | 4.8*10 <sup>-2</sup> |
| rs1257763  | 9  | 95933766  | + | A | G | G | 0.96 | -4.03  | 5.08 | 4.3*10 <sup>-1</sup> |
| rs473902   | 9  | 97296056  | + | T | G | G | 0.07 | -10.94 | 4.05 | 6.9*10 <sup>-3</sup> |
| rs7027110  | 9  | 108638867 | + | A | G | G | 0.77 | -1.61  | 1.91 | 4.0*10 <sup>-1</sup> |
| rs1468758  | 9  | 112846903 | + | T | C | C | 0.75 | -1.46  | 1.91 | 4.4*10 <sup>-1</sup> |
| rs751543   | 9  | 118162163 | + | T | C | C | 0.29 | 0.56   | 1.98 | 7.8*10 <sup>-1</sup> |
| rs7466269  | 9  | 132453905 | + | A | G | G | 0.35 | -1.65  | 1.72 | 3.4*10 <sup>-1</sup> |
| rs7849585  | 9  | 138251691 | + | T | G | G | 0.68 | 2.01   | 1.83 | 2.7*10 <sup>-1</sup> |
| rs7909670  | 10 | 12958770  | + | T | C | C | 0.58 | 1.76   | 1.66 | 2.9*10 <sup>-1</sup> |
| rs2145998  | 10 | 80791702  | + | A | T | T | 0.54 | 0.88   | 1.64 | 5.9*10 <sup>-1</sup> |
| rs11599750 | 10 | 101795432 | + | T | C | C | 0.62 | -0.46  | 1.71 | 7.9*10 <sup>-1</sup> |
| rs2237886  | 11 | 2767307   | + | T | C | C | 0.89 | -6.12  | 2.78 | 2.8*10 <sup>-2</sup> |
| rs7926971  | 11 | 12654616  | + | A | G | G | 0.47 | -0.87  | 1.63 | 6.0*10 <sup>-1</sup> |
| rs1330     | 11 | 17272605  | + | T | C | C | 0.65 | 0.04   | 1.73 | 9.8*10 <sup>-1</sup> |
| rs10838801 | 11 | 48054856  | + | A | G | G | 0.31 | 1.50   | 1.80 | 4.0*10 <sup>-1</sup> |
| rs1814175  | 11 | 49515748  | + | T | C | C | 0.64 | -1.71  | 1.81 | 3.4*10 <sup>-1</sup> |
| rs5017948  | 11 | 51270794  | + | A | T | T | 0.81 | -2.43  | 2.18 | 2.7*10 <sup>-1</sup> |
| rs3782089  | 11 | 65093395  | + | T | C | C | 0.93 | 1.83   | 3.50 | 6.0*10 <sup>-1</sup> |
| rs7112925  | 11 | 66582736  | + | T | C | C | 0.64 | 1.97   | 1.73 | 2.5*10 <sup>-1</sup> |
| rs634552   | 11 | 74959700  | + | T | G | G | 0.87 | 3.93   | 2.55 | 1.2*10 <sup>-1</sup> |
| rs494459   | 11 | 118079885 | + | T | C | C | 0.59 | -1.70  | 1.65 | 3.0*10 <sup>-1</sup> |

|                  |           |                 |   |          |          |          |             |              |             |                            |
|------------------|-----------|-----------------|---|----------|----------|----------|-------------|--------------|-------------|----------------------------|
| rs654723         | 11        | 128091365       | + | A        | C        | C        | 0.38        | 3.05         | 1.71        | 7.5*10 <sup>-2</sup>       |
| rs2856321        | 12        | 11747040        | + | A        | G        | G        | 0.37        | -2.50        | 1.74        | 1.5*10 <sup>-1</sup>       |
| rs10770705       | 12        | 20748734        | + | A        | C        | C        | 0.65        | 2.87         | 1.72        | 9.6*10 <sup>-2</sup>       |
| rs2638953        | 12        | 28425682        | + | G        | C        | C        | 0.67        | 3.19         | 1.74        | 6.7*10 <sup>-2</sup>       |
| rs2066807        | 12        | 55026949        | + | G        | C        | C        | 0.92        | -2.60        | 3.13        | 4.1*10 <sup>-1</sup>       |
| <b>rs1351394</b> | <b>12</b> | <b>64638093</b> | + | <b>T</b> | <b>C</b> | <b>C</b> | <b>0.50</b> | <b>-7.46</b> | <b>1.63</b> | <b>4.7*10<sup>-6</sup></b> |
| rs10748128       | 12        | 68113925        | + | T        | G        | G        | 0.64        | 0.99         | 1.85        | 5.9*10 <sup>-1</sup>       |
| rs11107116       | 12        | 92502635        | + | T        | G        | G        | 0.77        | 1.20         | 1.94        | 5.4*10 <sup>-1</sup>       |
| rs7971536        | 12        | 100897919       | + | A        | T        | T        | 0.52        | -1.46        | 1.71        | 3.9*10 <sup>-1</sup>       |
| rs11830103       | 12        | 122389499       | + | A        | G        | G        | 0.23        | 1.35         | 1.99        | 5.0*10 <sup>-1</sup>       |
| rs7332115        | 13        | 32045548        | + | T        | G        | G        | 0.37        | 2.19         | 1.69        | 1.9*10 <sup>-1</sup>       |
| rs3118905        | 13        | 50003335        | + | A        | G        | G        | 0.74        | -1.94        | 1.84        | 2.9*10 <sup>-1</sup>       |
| rs7319045        | 13        | 90822575        | + | A        | G        | G        | 0.61        | -0.71        | 1.66        | 6.7*10 <sup>-1</sup>       |
| rs1950500        | 14        | 23900690        | + | T        | C        | C        | 0.70        | -0.21        | 1.83        | 9.1*10 <sup>-1</sup>       |
| rs2093210        | 14        | 60027032        | + | T        | C        | C        | 0.43        | 2.45         | 1.70        | 1.5*10 <sup>-1</sup>       |
| rs1570106        | 14        | 67882868        | + | T        | C        | C        | 0.79        | 0.27         | 2.02        | 8.9*10 <sup>-1</sup>       |
| rs862034         | 14        | 74060499        | + | A        | G        | G        | 0.63        | -1.28        | 1.70        | 4.5*10 <sup>-1</sup>       |
| rs7155279        | 14        | 91555634        | + | T        | G        | G        | 0.60        | 2.34         | 1.67        | 1.6*10 <sup>-1</sup>       |
| rs16964211       | 15        | 49317787        | + | A        | G        | G        | 0.96        | 3.31         | 3.97        | 4.1*10 <sup>-1</sup>       |
| rs7178424        | 15        | 60167551        | + | T        | C        | C        | 0.55        | -1.81        | 1.64        | 2.7*10 <sup>-1</sup>       |
| rs10152591       | 15        | 67835211        | + | A        | C        | C        | 0.10        | -3.28        | 2.90        | 2.6*10 <sup>-1</sup>       |
| rs12902421       | 15        | 69948457        | + | T        | C        | C        | 0.03        | -0.26        | 4.93        | 9.6*10 <sup>-1</sup>       |
| rs5742915        | 15        | 72123686        | + | T        | C        | C        | 0.48        | -0.01        | 1.80        | 9.9*10 <sup>-1</sup>       |
| rs11259936       | 15        | 82371586        | + | A        | C        | C        | 0.50        | 0.65         | 1.64        | 6.9*10 <sup>-1</sup>       |
| rs16942341       | 15        | 87189909        | + | T        | C        | C        | 0.97        | 4.18         | 5.34        | 4.3*10 <sup>-1</sup>       |
| rs2871865        | 15        | 97012419        | + | G        | C        | C        | 0.88        | -2.46        | 2.78        | 3.8*10 <sup>-1</sup>       |
| rs4965598        | 15        | 98577137        | + | T        | C        | C        | 0.32        | 1.63         | 1.74        | 3.5*10 <sup>-1</sup>       |
| rs11648796       | 16        | 732191          | + | A        | G        | G        | 0.25        | 1.65         | 2.36        | 4.8*10 <sup>-1</sup>       |
| rs26868          | 16        | 2189377         | + | A        | T        | T        | 0.53        | -0.69        | 1.87        | 7.1*10 <sup>-1</sup>       |
| rs1659127        | 16        | 14295806        | + | A        | G        | G        | 0.66        | -4.41        | 1.83        | 1.6*10 <sup>-2</sup>       |
| rs8052560        | 16        | 87304743        | + | A        | C        | C        | 0.22        | 4.03         | 2.43        | 9.8*10 <sup>-2</sup>       |

|            |    |          |   |   |   |   |      |       |      |                      |
|------------|----|----------|---|---|---|---|------|-------|------|----------------------|
| rs4640244  | 17 | 21224816 | + | A | G | G | 0.38 | -0.72 | 1.91 | 7.1*10 <sup>-1</sup> |
| rs3110496  | 17 | 24941897 | + | A | G | G | 0.69 | 0.79  | 1.77 | 6.6*10 <sup>-1</sup> |
| rs3764419  | 17 | 26188149 | + | A | C | C | 0.63 | -0.66 | 1.72 | 7.0*10 <sup>-1</sup> |
| rs17780086 | 17 | 27367395 | + | A | G | G | 0.84 | -4.87 | 2.33 | 3.7*10 <sup>-2</sup> |
| rs1043515  | 17 | 34175722 | + | A | G | G | 0.54 | 0.84  | 1.64 | 6.1*10 <sup>-1</sup> |
| rs4986172  | 17 | 40571807 | + | T | C | C | 0.67 | 2.88  | 1.78 | 1.1*10 <sup>-1</sup> |
| rs2072153  | 17 | 44745013 | + | G | C | C | 0.32 | -0.66 | 1.75 | 7.1*10 <sup>-1</sup> |
| rs4605213  | 17 | 46599746 | + | G | C | C | 0.34 | -0.17 | 1.76 | 9.2*10 <sup>-1</sup> |
| rs227724   | 17 | 52133816 | + | A | T | T | 0.34 | 1.49  | 1.74 | 3.9*10 <sup>-1</sup> |
| rs2079795  | 17 | 56851431 | + | T | C | C | 0.65 | -1.24 | 1.73 | 4.7*10 <sup>-1</sup> |
| rs2665838  | 17 | 59320197 | + | G | C | C | 0.71 | 0.45  | 1.82 | 8.1*10 <sup>-1</sup> |
| rs11867479 | 17 | 65601802 | + | T | C | C | 0.65 | 0.46  | 1.73 | 7.9*10 <sup>-1</sup> |
| rs4800452  | 18 | 18981609 | + | T | C | C | 0.20 | 1.12  | 2.08 | 5.9*10 <sup>-1</sup> |
| rs9967417  | 18 | 45213498 | + | G | C | C | 0.56 | 1.56  | 1.67 | 3.5*10 <sup>-1</sup> |
| rs17782313 | 18 | 56002077 | + | T | C | C | 0.24 | -2.62 | 1.90 | 1.7*10 <sup>-1</sup> |
| rs12982744 | 19 | 2128193  | + | G | C | C | 0.60 | 2.25  | 1.67 | 1.8*10 <sup>-1</sup> |
| rs7507204  | 19 | 3379834  | + | G | C | C | 0.26 | 1.94  | 1.99 | 3.3*10 <sup>-1</sup> |
| rs891088   | 19 | 7135762  | + | A | G | G | 0.26 | -1.00 | 1.85 | 5.9*10 <sup>-1</sup> |
| rs4072910  | 19 | 8550031  | + | G | C | C | 0.40 | 1.05  | 2.20 | 6.3*10 <sup>-1</sup> |
| rs2279008  | 19 | 17144303 | + | T | C | C | 0.23 | 0.83  | 2.15 | 7.0*10 <sup>-1</sup> |
| rs17318596 | 19 | 46628935 | + | A | G | G | 0.64 | 0.24  | 1.77 | 8.9*10 <sup>-1</sup> |
| rs1741344  | 20 | 4049800  | + | T | C | C | 0.37 | 0.82  | 1.74 | 6.4*10 <sup>-1</sup> |
| rs2145272  | 20 | 6574218  | + | A | G | G | 0.36 | -0.46 | 1.72 | 7.9*10 <sup>-1</sup> |
| rs7274811  | 20 | 31796842 | + | T | G | G | 0.77 | 3.22  | 1.95 | 1.0*10 <sup>-1</sup> |
| rs143384   | 20 | 33489170 | + | A | G | G | 0.42 | -3.88 | 1.79 | 3.0*10 <sup>-2</sup> |
| rs237743   | 20 | 47336426 | + | A | G | G | 0.79 | 0.31  | 2.01 | 8.8*10 <sup>-1</sup> |
| rs2834442  | 21 | 34612656 | + | A | T | T | 0.36 | -4.49 | 1.70 | 8.2*10 <sup>-3</sup> |
| rs4821083  | 22 | 31386341 | + | T | C | C | 0.17 | 0.89  | 2.23 | 6.9*10 <sup>-1</sup> |

SNPs in bold were significantly associated with intracranial volume (after Bonferoni correction). Rs1490384 with  $p=2.3*10^{-7}$  lies in the same locus as rs4273712, which reached genome-wide significance in our meta-analysis ( $r^2=0.4$  and  $D'=1$  according to HapMap CEU). Rs1351394 resides in the same locus that was found to be associated with head circumference.<sup>1</sup>

### **Section 1: Description of discovery samples.**

The CHARGE consortium includes large prospective community-based cohort studies that have genome-wide variation data coupled with extensive data on multiple phenotypes, as detailed previously.<sup>2</sup> What follows are some details about each study.

#### **Agings Gene-Environment Susceptibility - Reykjavik Study (AGES-Reykjavik)**

The AGES-Reykjavik Study is a single center prospective cohort study based on the Reykjavik Study. The Reykjavik Study was initiated in 1967 by the Icelandic Heart Association to study cardiovascular disease and risk factors. The cohort included men and women born between 1907 and 1935 who lived in Reykjavik at the 1967 baseline examination. Re-examination of surviving members of the cohort was initiated in 2002 as part of the AGES-Reykjavik Study. The AGES-Reykjavik Study is designed to investigate aging using a multifaceted comprehensive approach that includes detailed measures of brain function and structure. All cohort members were European Caucasians. The study design has been described previously.<sup>3</sup> Briefly, as part of a comprehensive examination, all participants answered a questionnaire, underwent a clinical examination and had blood drawn. All consenting participants without contraindications were offered a brain MRI on a dedicated machine in the study center: a total of 5003 participants had an MRI. Of these, 3664 were genotyped at the Laboratory of Neurogenetics, Intramural Research Program, NIA, Bethesda, Maryland, and 3219 participants passed QC criteria for genotyping. We further excluded 548 persons due to dementia, cortical infarcts or technical reasons. The remaining 2671 persons underwent MRI post-processing and were available for the GWAS on intracranial volume and brain volume.

#### **The Atherosclerosis Risk in Communities Study (ARIC)**

The ARIC study is a prospective population-based study of atherosclerosis and clinical atherosclerotic diseases in 15,792 men and women, including 11,478 white participants, drawn from 4 United States communities (Suburban Minneapolis, Minnesota; Washington County, Maryland; Forsyth County, North Carolina; and Jackson, Mississippi). In the first 3 communities, the sample reflects the demographic composition of the community. In Jackson, only black residents were enrolled. Participants were between age 45 and 64 years at their baseline examination in 1987-1989 when blood was drawn for DNA extraction and participants consented to genetic testing. Details of the ARIC Study sampling and study design were previously published.<sup>4</sup> Participants in the present study were a subset of the ARIC cohort who participated in brain MRI studies in 2004–2006.

Briefly, 1,920 participants aged 55 years and older from two ARIC field centers (Forsyth County, NC, and Jackson, MS) completed brain MR imaging at visit 3 (1993-1995).<sup>5</sup> In 2004-2006, as part of the ARIC Brain MRI ancillary study follow-up visit, 1134 participants underwent a second brain MRI. Scans from the second visit were rated using a semi-automated volumetric analysis. These data were used in the present analyses. Only white participants with genome-wide genotype data are included. A total of 359 persons were available for the intracranial volume analysis and 312 for the brain volume analysis.

#### **The Austrian Stroke Prevention Study (ASPS)**



The ASPS study is a single center prospective follow-up study on the effects of vascular risk factors on brain structure and function in the normal elderly population of the city of Graz, Austria. The procedure of recruitment and diagnostic work-up of study participants has been described previously.<sup>6</sup> A total of 2007 participants were randomly selected from the official community register stratified by gender and 5 year age groups. Individuals were excluded from the study if they had a history of neuropsychiatric disease, including previous stroke, transient ischemic attacks, and dementia, or an abnormal neurologic examination determined on the basis of a structured clinical interview and a physical and neurologic examination. During 2 study periods between September 1991 and March 1994 and between January 1999 and December 2003 an extended diagnostic work-up including MRI and neuropsychological testing was done in 1076 individuals aged 45 to 85 years randomly selected from the entire cohort: 509 from the first period and 567 from the second. In 1992, blood was drawn from all study participants for DNA extraction. They were all European Caucasians. Genotyping was performed in 945 participants, and there were 725 subjects who also underwent MRI scanning with assessment of brain volume. In the ASPS assessment of intracranial volume was not possible (see also section 2). Genotyping was done at the Human Genotyping Facility, Genetic Laboratory Department of Internal Medicine, Erasmus MC, Rotterdam, The Netherlands.

### **Framingham Heart Study (FHS)**

The FHS is a three-generation, single-site, community-based, prospective cohort study that was initiated in 1948 to investigate risk factors for cardiovascular disease including stroke. It now comprises 3 generations of participants: the original cohort followed since 1948 (Original); their offspring and spouses of the offspring, followed since 1971 (Offspring); and children from the largest offspring families enrolled in 2000 (Gen 3). The Original cohort enrolled 5209 men and women who comprised two-thirds of the adult population then residing in Framingham, MA, USA. Survivors continue to receive biennial examinations. The Offspring cohort comprises 5,124 persons (including 3,514 biological offspring) who have been examined approximately once every 4 years. Participants in the first two generations were invited to undergo an initial brain MRI in 1999-2005. The population of Framingham was virtually entirely whites in 1948 when the Original cohort was recruited. Vascular risk factors and outcomes, including transient ischemic attack, stroke and dementia, were identified prospectively since 1948 through an ongoing system of FHS clinic and local hospital surveillance. Participants had DNA extracted and provided consent for genotyping in the 1990s. Genotyping was performed at Affymetrix (Santa Clara, CA) through an NHLBI funded SNP-Health Association Resource (SHARe) project. Genotyping was attempted in 5,293 participants, and 4,519 persons met QC criteria. Failures (call rate <97%, extreme heterozygosity or high Mendelian error rate) were largely restricted to persons with whole-genome amplified DNA and DNA extracted from stored serum samples. Of these 4,519 persons 4,116 were alive in 1999 when the MRI study began. Of these, 2320 participants from the Original and Offspring cohorts have undergone cranial MRI with measurement of intracranial volume; one was person excluded because of insufficient information for principal components 1, 5, 6 and 7 found to be associated with intracranial volume in this sample. Of the remaining 2319 participants, 77 participants were excluded for dementia, multiple sclerosis, cortical infarcts, or because of other neurological conditions such as brain

tumors or severe head injury that might confound the assessment of brain volume. The remaining 2242 participants constitute the FHS sample for the brain volume analysis.

### **Rotterdam Study**

The Rotterdam Study is a population-based cohort study among inhabitants of a district of Rotterdam (Ommoord), The Netherlands, and aims to examine the determinants of disease and health in the elderly with a focus on neurogeriatric, cardiovascular, bone, and eye disease.<sup>7-8</sup> In 1990-1993, 7,983 persons participated and were re-examined every 3 to 4 years (Rotterdam Study I). In 2000-2001 the cohort was expanded by 3,011 persons who had not yet been part of the Rotterdam Study (Rotterdam Study II). Subsequently, in 2005-2008 a second expansion comprised 3932 persons 45 years and older, who had not yet participated in any of the previous rounds (Rotterdam Study III).<sup>7</sup>

All participants had DNA extracted at their first visit. Genotyping was attempted in participants with high-quality extracted DNA in 2007-2008. Genotyping was done at the Human Genotyping Facility, Genetic Laboratory Department of Internal Medicine, Erasmus MC, Rotterdam, The Netherlands. In 1995-1996, 563 of the 7983 participants from the Rotterdam Study I were randomly selected to undergo cranial MRI scanning. Of these, 421 had both genotype and MRI data available. Similarly, in 2005-2006, 895 non-demented persons of the 3011 participants from the Rotterdam Study II were randomly selected to undergo cranial MRI scanning. Both MRI data and genome-wide genotype data were available in 679 individuals. In the Rotterdam Study III cohort MRI was implemented in the core protocol of the study, and 1726 persons had genotype data as well as MRI data available.

## **Section 2: Description of replication and extension samples.**

The replication sample consisted of a subset of white participants from the AGES-Reykjavik study who had not undergone genome-wide genotyping at the time of the study, but had MRI scans with measurement of intracranial volume available. Methods for measurement of intracranial volume are the same as for the rest of the AGES-Reykjavik study. Using TaqMan assays we genotyped rs4273712 and rs9303525 ( $p_{\text{discovery}}=1.6*10^{-12}$ ) which tags the chromosome 17 inversion in perfect LD with rs9915547 ( $r^2=1$  and  $D'=1$  between these two SNPs). 1607 participants with genotype data were used in this analysis.

The genome-wide significant SNPs from the intracranial volume GWAS were examined *in silico* in an existing meta-analysis on head circumference during infancy from the EGG-consortium ( $n=10,768$ ).<sup>1</sup> This meta-analysis consisted of seven studies with genome-wide data: the Northern Finnish Birth Cohort Study 1966,<sup>9</sup> the Generation R Study,<sup>10-11</sup> the Children's Hospital of Philadelphia,<sup>12</sup> the Raine Study,<sup>13</sup> the Lifestyle-Immune System-Allergy Study,<sup>14</sup> the Avon Longitudinal Study of Parents and Children,<sup>15</sup> and the Copenhagen Study on Asthma in Childhood.<sup>16</sup> Head circumference was measured at on average 14.5 months of age.

### **Section 3: Details of the various MRI protocols used in each sample.**

In all of the studies, the MRI scans were performed in eligible participants in a standardized fashion and interpreted without knowledge of demographic or clinical information. The field strength of the scanners used ranged from 0.5T to 1.5 T. T1- and T2-weighted scans in the axial plane were obtained for all participants. Some studies had additional sequences available for use in their post-processing algorithm; these included fluid attenuation inversion recovery (FLAIR), or proton density, or inversion recovery sequences. Each study used its own custom-made or freely downloadable, fully automatic or semi-quantitative MRI post-processing software to measure intracranial volume and brain volume.

- AGES used the Montreal Neurological Institute Pipeline<sup>17</sup>
- ARIC used semi-automated tracings<sup>18</sup>
- ASPS used structural image evaluation, using normalisation of atrophy (SIENAX) (<http://www.fmrib.ox.ac.uk/fsl>)
- FHS used custom-built software<sup>19-20</sup>
- RS used Elastix and custom-built software<sup>21-22</sup>

More details and background of each software are detailed below; nevertheless, all software have been extensively validated against manual tracings, which are considered the golden standard. Any remaining heterogeneity across studies due to the different software would lead to lower power, and would not lead to false-positive findings. All software packages provide intracranial volume and brain volume in milliliters; only exception is SIENAX which does not provide intracranial volume. Brain volume was expressed as percentage of intracranial volume in order to correct for individual head-size differences; SIENAX only provides this estimate and no absolute volumes. The only point of consideration is that whereas ARIC, FHS, and RS studies excluded infratentorial tissues from their measurements, AGES, and ASPS did not. However, we do not feel that this would lead to differential effects between the studies; moreover given that infratentorial tissues accounts for only 10-15% of the total intracranial vault, any possible effect is probably very small.

#### **AGES-Reykjavik**

Images were acquired on a 1.5 T Signa TwinSpeed system (General Electric Medical Systems, Waukesha, Wisconsin, USA). The MRI protocol for segmentation of brain tissues and intra-cranial volume consisted of the following pulse sequences: a proton density/T2-weighted fast spin echo sequence; and a fluid attenuated inversion recovery (FLAIR) sequence. These sequences were acquired with 3 mm thick interleaved slices. Images were also acquired with a T1-weighted three-dimensional spoiled gradient echo sequence with slice thickness of 1.5 mm. Intracranial volume and brain volume was computed automatically with an algorithm based on the Montreal Neurological Institute pipeline.<sup>17</sup> The AGES-Reykjavik/Montreal Neurological Institute pipeline has been modified to accommodate full brain coverage including cerebellum and brainstem, multispectral images (T1-weighted three-dimensional spoiled gradient echo sequence, FLAIR, and proton density/T2-weighted fast spin echo sequences), high throughput, and minimal editing. All scans were evaluated visually and if needed, incorrectly labelled voxels were corrected manually.

### **ARIC**

Magnetic resonance imaging of the brain was performed on 1.5-T MRI scanners (General Electric Medical Systems) under the supervision of neuroradiologists. MRI measurements of brain anatomy were performed using previously described semiautomated methods.<sup>18</sup> Total intracranial volume was measured from T1-weighted spin-echo sagittal images, each set consisting of 32 contiguous 5-mm-thick interleaved sections with no interslice gap, a field of view of 24 cm, and a matrix of  $256 \times 192$ , obtained with the following sequence: scan time, 2.5 minutes; echo time, 14 milliseconds; 2 repetitions; and repetition time, 500 milliseconds. Brain volume was determined from axial fluid-attenuated inversion recovery images, each set consisting of 48 contiguous 3-mm-thick interleaved sections with no interslice gap, a field of view of 22 cm, and a matrix of  $256 \times 160$ , obtained with the following sequence: scan time, 9 minutes; echo time, 144.8 milliseconds; inversion time, 2600 milliseconds; repetition time, 11 seconds; bandwidth,  $\pm 15.6$  kHz. Interactive image-processing steps were performed at the Mayo Clinic by a research associate who had no knowledge of the subjects' personal or medical histories. A fully automated algorithm was used to segment each section of the edited multi-slice fluid-attenuated inversion recovery sequence into voxels assigned to one of the following 3 categories: brain, cerebrospinal fluid, or leukoaraiosis. The mean absolute error of this method of brain volume measurement is 1.4%, the mean test-retest coefficient of variation is 0.3%.<sup>18</sup>

### **ASPS**

MRI was performed on 1.5-Tesla whole body imaging systems (Gyroscan S 15 and ACS, Philips Medical Systems, Eindhoven, The Netherlands) using an axial proton-density / T2-weighted dual spin echo sequence. Additionally, T1-weighted images were acquired in the sagittal plane. For all images, slice thickness was 5 mm with an interslice gap of 0.5 mm. Brain percentage was calculated from the T2-weighted sequence using the fully automated structural image evaluation, using normalisation, of atrophy (SIENAX) method, which is part of the University of Oxford Functional MRI of the Brain (FMRIB) group's Software Library (FSL) (<http://www.fmrib.ox.ac.uk/fsl>). Brain percentage was estimated from the ratio of parenchymal volume (grey and white matter) to the total volume given by the outer surface of the brain.

### **FHS**

Participants were evaluated with a 1 or 1.5-Tesla Siemens Magnetom scanner. 3D T1 and double echo proton density (PD) and T2 coronal images acquired in 4-mm contiguous slices were performed. All images were transferred to the centralized reading center at the University of California–Davis Medical Center and analyses were performed on QUANTA 6.2, a custom-designed image analysis package operating on a Sun Microsystems Ultra 5 workstation.<sup>20</sup> For the assessment of total intracranial volume coronal sections were used to manually outline the intracranial vault above the tentorium in each slice and these data were summed to determine the total intracranial volume. Semi-automated analysis of pixel distributions based on mathematical modeling of MRI pixel intensity histograms for cerebrospinal fluid (CSF) and brain matter (white matter and gray matter) were used to determine the optimal threshold of pixel intensity to best distinguish CSF from brain matter based on methods published previously.<sup>19-20</sup> This

yielded brain volume. The interrater reliability within the FHS study sample averaged 0.99 for both intracranial volume and brain volume.

### **Rotterdam Study**

In 1995-1996 participants originating from the Rotterdam Study I underwent MRI of the brain on a 1.5-Tesla Siemens Vision scanner.<sup>23</sup> The protocol included axial T1-weighted, T2-weighted, and proton-density scans with slice thickness of 5mm and a high-resolution 3D inversion recovery HASTE scan with slice thickness of 1.25 mm.<sup>21</sup> In 2005-2006, participants originating from the Rotterdam Study II and III underwent MRI of the brain including axial T1-weighted, proton-density, and FLAIR sequences on a 1.5-Tesla GE Healthcare scanner.<sup>24</sup> The slice thickness was 1.6 mm on the T1-weighted, and proton-density weighted sequences and 2.5 mm on the FLAIR sequence. All slices were contiguous.

Brain volume quantification was performed using a custom-designed multi-sequence manually trained k-nearest neighbor classification algorithm.<sup>23,25</sup> In scans from Rotterdam Study I the HASTE, T2, and Proton-density sequences were used; in scans from Rotterdam Study II and III the Proton-density, FLAIR, and T1 sequences were used. We removed non-brain tissue (skull, eyes, dura) – thereby obtaining intracranial volume – by non-linearly registering all brain scans to a manually created template in which non-brain tissues were masked. In all scans, visual checks were performed and if needed any segmentation errors manually corrected.<sup>25</sup>

## References.

1. Taal, H.R. et al. Common variants at 12q15 and 12q24 are associated with infant head circumference. *Nat Genet* **in press**(2012).
2. Psaty, B.M. et al. Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE) Consortium: Design of prospective meta-analyses of genome-wide association studies from 5 cohorts. *Circ Cardiovasc Genet* **2**, 73-80 (2009).
3. Harris, T.B. et al. Age, Gene/Environment Susceptibility-Reykjavik Study: multidisciplinary applied phenomics. *Am J Epidemiol* **165**, 1076-87 (2007).
4. ARIC, I. The Atherosclerosis Risk in Communities (ARIC) Study: design and objectives. The ARIC investigators. *Am J Epidemiol* **129**, 687-702 (1989).
5. Mosley, T.H., Jr. et al. Cerebral MRI findings and cognitive functioning: the Atherosclerosis Risk in Communities study. *Neurology* **64**, 2056-62 (2005).
6. Schmidt, R., Fazekas, F., Kapeller, P., Schmidt, H. & Hartung, H.P. MRI white matter hyperintensities: three-year follow-up of the Austrian Stroke Prevention Study. *Neurology* **53**, 132-9 (1999).
7. Hofman, A. et al. The Rotterdam Study: 2010 objectives and design update. *Eur J Epidemiol* **24**, 553-72 (2009).
8. Hofman, A. et al. The Rotterdam Study: 2012 objectives and design update. *Eur J Epidemiol* **26**, 657-86 (2011).
9. Sabatti, C. et al. Genome-wide association analysis of metabolic traits in a birth cohort from a founder population. *Nat Genet* **41**, 35-46 (2009).
10. Jaddoe, V.W. et al. The Generation R Study: design and cohort update until the age of 4 years. *Eur J Epidemiol* **23**, 801-11 (2008).
11. Jaddoe, V.W. et al. The Generation R Study: design and cohort update 2010. *Eur J Epidemiol* **25**, 823-41 (2010).
12. Hakonarson, H. et al. A genome-wide association study identifies KIAA0350 as a type 1 diabetes gene. *Nature* **448**, 591-4 (2007).
13. Newnham, J.P., Evans, S.F., Michael, C.A., Stanley, F.J. & Landau, L.I. Effects of frequent ultrasound during pregnancy: a randomised controlled trial. *Lancet* **342**, 887-91 (1993).
14. Rzehak, P. et al. Associations between BMI and the FTO gene are age dependent: results from the GINI and LISA birth cohort studies up to age 6 years. *Obes Facts* **3**, 173-80 (2010).
15. Golding, J., Pembrey, M. & Jones, R. ALSPAC--the Avon Longitudinal Study of Parents and Children. I. Study methodology. *Paediatr Perinat Epidemiol* **15**, 74-87 (2001).
16. Bisgaard, H. The Copenhagen Prospective Study on Asthma in Childhood (COPSAC): design, rationale, and baseline data from a longitudinal birth cohort study. *Ann Allergy Asthma Immunol* **93**, 381-9 (2004).
17. Zijdenbos, A.P., Forghani, R. & Evans, A.C. Automatic "pipeline" analysis of 3-D MRI data for clinical trials: application to multiple sclerosis. *IEEE Trans Med Imaging* **21**, 1280-91 (2002).
18. Jack, C.R., Jr. et al. FLAIR histogram segmentation for measurement of leukoaraiosis volume. *J Magn Reson Imaging* **14**, 668-76 (2001).

19. Seshadri, S. et al. Stroke risk profile, brain volume, and cognitive function: the Framingham Offspring Study. *Neurology* **63**, 1591-9 (2004).
20. DeCarli, C. et al. Measures of brain morphology and infarction in the framingham heart study: establishing what is normal. *Neurobiol Aging* **26**, 491-510 (2005).
21. Ikram, M.A. et al. Brain tissue volumes in the general elderly population. The Rotterdam Scan Study. *Neurobiol Aging* **29**, 882-90 (2008).
22. Klein, S., Staring, M. & Pluim, J.P. Comparison of gradient approximation techniques for optimisation of mutual information in nonrigid registration. in *Proc. SPIE. Medical Imaging: Image process* Vol. 5747 (eds Fitzpatrick, J.M. & Reinhardt, J.M.) 192-203 (2005).
23. Ikram, M.A. et al. The Rotterdam Scan Study: design and update up to 2012. *Eur J Epidemiol* **26**, 811-24 (2011).
24. Vernooij, M.W. et al. Incidental findings on brain MRI in the general population. *N Engl J Med* **357**, 1821-8 (2007).
25. Vrooman, H.A. et al. Multi-spectral brain tissue segmentation using automatically trained k-Nearest-Neighbor classification. *Neuroimage* **37**, 71-81 (2007).