**Table S1 Details of the GWAS datasets utilized in this research.**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohort** | **ID** | **Trait** | **Diagnosis code** | **Consortium** | **Number of SNPs** | **Sample size** | **ncase** | **control** | **Population** | **PMID** | **Year** |
| Cohort 1 | ukb-a-389 | Standing height | —— | UK biobank | 10,894,596 | 336,474 | —— | —— | European | —— | 2017 |
|  | R11\_C3\_TESTIS | Malignant neoplasm of testis | ICD-O-3 | FinnGen | 20,074,896 | 144,160 | 536 | 143,624 | European | 36653562 | 2024 |
| Cohort 2 | GCST90018959 | Height | —— | NA | 19,028,518 | 360,388 | —— | —— | European | 34594039 | 2021 |
|  | GCST90041906 | Testicular carcinoma | PheCode 187.2 | UK biobank | —— | 208,768 | 797 | 207,971 | European | 34737426 | 2021 |
|  | —— | eQTLs | —— | eQTLGen consortium | —— | 31,684 | —— | —— | European | 34475573 | 2021 |

**Table S2 Gene Set Enrichment Analysis Across Multiple Enrichr Libraries in Cohort 1.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Trait** | **Term** | **Library** | **pvalue** | **qvalue** | **z-score** | **Combined score** |
| Height | Body Height | DisGeNET | 5.41E-12 | 1.88E-08 | 5.401 | 140.1 |
|  | Body mass index | DisGeNET | 3.58E-07 | 4.14E-04 | 3.621 | 53.74 |
|  | Finding of body mass index | DisGeNET | 3.58E-07 | 4.14E-04 | 3.621 | 53.74 |
|  | Physical Activity Measurement | DisGeNET | 1.92E-06 | 1.67E-03 | 6.206 | 81.69 |
|  | Hip circumference | DisGeNET | 6.92E-05 | 4.80E-02 | 5.65 | 54.12 |
| Testicular cancer | Testicular cancer | Jensen\_DISEASES | 4.08E-06 | 4.89E-05 | 1332 | 16530 |
|  | Piebaldism | Jensen\_DISEASES | 2.60E-03 | 1.25E-02 | 555.1 | 3305 |
|  | Kallmann syndrome | Jensen\_DISEASES | 3.60E-03 | 1.25E-02 | 391.7 | 2205 |
|  | Mastocytosis | Jensen\_DISEASES | 4.79E-03 | 1.25E-02 | 289.5 | 1546 |
|  | Klinefelter's syndrome | Jensen\_DISEASES | 5.19E-03 | 1.25E-02 | 266.3 | 1401 |
| Height & Testicular cancer | extracellular matrix organization (GO:0030198) | GO\_Biological\_Process\_2021 | 9.09E-10 | 1.36E-06 | 4.711 | 98.07 |
|  | negative regulation of transcription, DNA-templated (GO:0045892) | GO\_Biological\_Process\_2021 | 1.37E-09 | 1.36E-06 | 2.851 | 58.17 |
|  | negative regulation of transcription by RNA polymerase II (GO:0000122) | GO\_Biological\_Process\_2021 | 4.04E-09 | 2.67E-06 | 3.137 | 60.63 |
|  | extracellular structure organization (GO:0043062) | GO\_Biological\_Process\_2021 | 2.71E-08 | 1.16E-05 | 5.009 | 87.27 |
|  | external encapsulating structure organization (GO:0045229) | GO\_Biological\_Process\_2021 | 2.93E-08 | 1.16E-05 | 4.983 | 86.43 |
|  | Pathways in cancer | KEGG\_2021\_Human | 1.92E-05 | 4.32E-03 | 2.635 | 28.61 |
|  | Human T-cell leukemia virus 1 infection | KEGG\_2021\_Human | 2.05E-04 | 2.31E-02 | 3.301 | 28.03 |
|  | Hepatitis B | KEGG\_2021\_Human | 5.84E-04 | 3.42E-02 | 3.504 | 26.09 |
|  | Morphine addiction | KEGG\_2021\_Human | 6.08E-04 | 3.42E-02 | 4.618 | 34.2 |
|  | Cushing syndrome | KEGG\_2021\_Human | 1.51E-03 | 5.71E-02 | 3.31 | 21.5 |

**Table S3 Leave-one-out Sensitivity analysis in Cohort 1.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Exposure** | **Outcome** | **samplesize** | **SNP** | **Beta** | **Se** | **pvalue** |
| Height | TC | 144160 | rs10029732 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs10033541 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs10069931 | 0.314 | 0.150 | 0.037 |
|  |  | 144160 | rs10082476 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs10084690 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs10139746 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs10151561 | 0.333 | 0.151 | 0.028 |
|  |  | 144160 | rs10155941 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs10165255 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs1020048 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs10200995 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs10202701 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs10207579 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs10212258 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs10215853 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs1025337 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs10401891 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs10403206 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs1043413 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs1043547 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs1044322 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs10448110 | 0.317 | 0.151 | 0.035 |
|  |  | 144160 | rs10498672 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs1065368 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs10737170 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs1074683 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs10748128 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs10756792 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs10765754 | 0.337 | 0.150 | 0.025 |
|  |  | 144160 | rs10826579 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs10851704 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs10870597 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs10874746 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs10877013 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs10914505 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs10916606 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs10922475 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs10937460 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs10952289 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs10995318 | 0.313 | 0.151 | 0.038 |
|  |  | 144160 | rs10998288 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs11014285 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs11047211 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs11077964 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs11111305 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs11144782 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs11152363 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs11161673 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs11205303 | 0.329 | 0.152 | 0.030 |
|  |  | 144160 | rs11245333 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs11252860 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs11259936 | 0.334 | 0.152 | 0.028 |
|  |  | 144160 | rs112705086 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs112957890 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs1132148 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs114693875 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs114784809 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs115227414 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs11553764 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs11555134 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs11588850 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs11591214 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs11600815 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs11618507 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs11666304 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs11667331 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs116782923 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs11681299 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs116920478 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs11722554 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs11731421 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs11738691 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs11744543 | 0.335 | 0.151 | 0.026 |
|  |  | 144160 | rs11746047 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs11747997 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs11774206 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs11775903 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs11777239 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs1178162 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs11783086 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs118083081 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs11864330 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs11955153 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs12051048 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs12103006 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs12216030 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs12269901 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs12296480 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs12306741 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs12312144 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs12347137 | 0.303 | 0.151 | 0.044 |
|  |  | 144160 | rs12404594 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs12408482 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs12417930 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs12452505 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs12458880 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs12483653 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs12529733 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs12533527 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs12594720 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs12615742 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs12628193 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs12634315 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs12656497 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs12682937 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs12740738 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs12900132 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs12942811 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs12948439 | 0.308 | 0.151 | 0.041 |
|  |  | 144160 | rs12952981 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs12968652 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs12981554 | 0.333 | 0.151 | 0.028 |
|  |  | 144160 | rs12985850 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs13021881 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs13080165 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs13126069 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs1317149 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs1317867 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs13210323 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs13238709 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs13252528 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs1327313 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs13401747 | 0.336 | 0.151 | 0.026 |
|  |  | 144160 | rs13430869 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs1345991 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs1355603 | 0.335 | 0.152 | 0.027 |
|  |  | 144160 | rs1360504 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs1366594 | 0.316 | 0.151 | 0.036 |
|  |  | 144160 | rs1369703 | 0.328 | 0.152 | 0.031 |
|  |  | 144160 | rs137933811 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs138809270 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs138937927 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs1393421 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs1395602 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs1403987 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs140574823 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs141495779 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs1415701 | 0.308 | 0.151 | 0.041 |
|  |  | 144160 | rs1417488 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs142190120 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs142669291 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs143222446 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs143384 | 0.300 | 0.153 | 0.050 |
|  |  | 144160 | rs143743568 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs143783471 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs143840904 | 0.333 | 0.151 | 0.028 |
|  |  | 144160 | rs1443536 | 0.324 | 0.152 | 0.032 |
|  |  | 144160 | rs1443749 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs145435234 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs146851424 | 0.329 | 0.151 | 0.030 |
|  |  | 144160 | rs147110934 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs147478180 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs148537227 | 0.308 | 0.151 | 0.041 |
|  |  | 144160 | rs148683230 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs151123887 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs1533269 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs1535197 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs153560 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs1573891 | 0.337 | 0.151 | 0.026 |
|  |  | 144160 | rs1574220 | 0.323 | 0.151 | 0.032 |
|  |  | 144160 | rs1593071 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs1599473 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs16824590 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs16942324 | 0.310 | 0.151 | 0.040 |
|  |  | 144160 | rs17038164 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs17157112 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs17197114 | 0.317 | 0.151 | 0.035 |
|  |  | 144160 | rs1729137 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs17378391 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs174600 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs17472816 | 0.334 | 0.150 | 0.027 |
|  |  | 144160 | rs17516020 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs17647041 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs17647719 | 0.320 | 0.151 | 0.035 |
|  |  | 144160 | rs17673793 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs17690703 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs17741562 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs17743415 | 0.311 | 0.151 | 0.040 |
|  |  | 144160 | rs17855988 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs1788161 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs1797623 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs183761758 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs1862901 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs1884897 | 0.307 | 0.151 | 0.043 |
|  |  | 144160 | rs1886686 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs1910252 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs1910466 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs1936792 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs1948047 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs1952256 | 0.329 | 0.152 | 0.030 |
|  |  | 144160 | rs2005053 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs2035901 | 0.333 | 0.151 | 0.028 |
|  |  | 144160 | rs2088483 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs2117149 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs2122858 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs2131371 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs2137777 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs2139028 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs2140046 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs215226 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs2181834 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs2194411 | 0.318 | 0.151 | 0.036 |
|  |  | 144160 | rs2230033 | 0.339 | 0.151 | 0.025 |
|  |  | 144160 | rs224313 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs2270894 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs227745 | 0.309 | 0.151 | 0.040 |
|  |  | 144160 | rs2278093 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs2282580 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs2289635 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs2290154 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs229624 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs2296316 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs2303597 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs2305769 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs233598 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs2342082 | 0.315 | 0.151 | 0.037 |
|  |  | 144160 | rs2417860 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs2434576 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs244711 | 0.305 | 0.151 | 0.044 |
|  |  | 144160 | rs2451948 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs2456725 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs2513299 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs2531986 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs2581828 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs2610986 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs2631676 | 0.308 | 0.150 | 0.041 |
|  |  | 144160 | rs2650965 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs2655225 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs2690034 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs2715553 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs2737215 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs273974 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs2740991 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs2746026 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs2763263 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs2780226 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs2802346 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs2812237 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs28410896 | 0.316 | 0.151 | 0.036 |
|  |  | 144160 | rs28470731 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs2851023 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs28519617 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs2853993 | 0.342 | 0.151 | 0.024 |
|  |  | 144160 | rs2871960 | 0.312 | 0.153 | 0.041 |
|  |  | 144160 | rs2885697 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs2888604 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs2890718 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs2900208 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs2916261 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs291970 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs2925155 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs2967363 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs2974427 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs2985313 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs3003137 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs300982 | 0.331 | 0.151 | 0.029 |
|  |  | 144160 | rs3011897 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs3020407 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs3020619 | 0.315 | 0.151 | 0.038 |
|  |  | 144160 | rs303084 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs3094626 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs310792 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs3116200 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs3118906 | 0.356 | 0.151 | 0.019 |
|  |  | 144160 | rs3213332 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs3218036 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs332194 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs34118426 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs34517439 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs34642857 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs34647936 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs34776209 | 0.341 | 0.151 | 0.024 |
|  |  | 144160 | rs34919557 | 0.314 | 0.151 | 0.037 |
|  |  | 144160 | rs35307904 | 0.314 | 0.151 | 0.038 |
|  |  | 144160 | rs35467921 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs35485741 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs35539500 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs35628589 | 0.329 | 0.151 | 0.030 |
|  |  | 144160 | rs35629473 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs35713889 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs35873563 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs35874463 | 0.336 | 0.151 | 0.026 |
|  |  | 144160 | rs35897527 | 0.323 | 0.151 | 0.032 |
|  |  | 144160 | rs35954730 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs35990522 | 0.319 | 0.151 | 0.034 |
|  |  | 144160 | rs36101807 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs36226649 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs3732858 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs3751695 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs3761181 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs3796515 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs3798417 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs3816562 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs3828559 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs3914294 | 0.316 | 0.151 | 0.036 |
|  |  | 144160 | rs3983746 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs400040 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs41177 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs41271299 | 0.313 | 0.151 | 0.038 |
|  |  | 144160 | rs41271357 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs4151450 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs42044 | 0.330 | 0.152 | 0.029 |
|  |  | 144160 | rs4235816 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs4245596 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs4252548 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs4258054 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs4287972 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs4291276 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs4316494 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs4318495 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs439205 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs4401680 | 0.319 | 0.151 | 0.034 |
|  |  | 144160 | rs440292 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs4417735 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs4421120 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs4466161 | 0.319 | 0.151 | 0.034 |
|  |  | 144160 | rs45446698 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs45528934 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs459193 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs4621412 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs4700662 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs472659 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs4735766 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs4761529 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs4767492 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs4768862 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs4775769 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs4776470 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs4788815 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs4788891 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs481237 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs4814656 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs4834802 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs4842133 | 0.316 | 0.151 | 0.037 |
|  |  | 144160 | rs4868125 | 0.312 | 0.151 | 0.039 |
|  |  | 144160 | rs4872482 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs4885084 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs4899012 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs4899401 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs4906203 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs4927132 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs494938 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs4965600 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs4980067 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs4985445 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs4986172 | 0.329 | 0.151 | 0.030 |
|  |  | 144160 | rs498685 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs506154 | 0.312 | 0.152 | 0.039 |
|  |  | 144160 | rs519384 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs52826764 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs55652172 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs55726184 | 0.317 | 0.151 | 0.035 |
|  |  | 144160 | rs55749333 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs55778236 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs55852614 | 0.336 | 0.151 | 0.026 |
|  |  | 144160 | rs55933602 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs56165045 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs56302937 | 0.331 | 0.151 | 0.029 |
|  |  | 144160 | rs563537 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs56383911 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs56400819 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs57176772 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs575050 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs58087925 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs58408429 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs58416107 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs58512942 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs59985551 | 0.323 | 0.152 | 0.033 |
|  |  | 144160 | rs6007043 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs6016223 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs6037736 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs6082358 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs6119945 | 0.332 | 0.151 | 0.027 |
|  |  | 144160 | rs61729527 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs61732778 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs61776719 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs61980810 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs62046625 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs62111457 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs62275579 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs62294340 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs62296061 | 0.339 | 0.150 | 0.024 |
|  |  | 144160 | rs62348757 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs62358926 | 0.323 | 0.151 | 0.032 |
|  |  | 144160 | rs62370472 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs62390617 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs62396185 | 0.319 | 0.152 | 0.036 |
|  |  | 144160 | rs62438578 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs62501195 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs62515437 | 0.320 | 0.152 | 0.035 |
|  |  | 144160 | rs62621197 | 0.314 | 0.151 | 0.038 |
|  |  | 144160 | rs640119 | 0.316 | 0.150 | 0.035 |
|  |  | 144160 | rs6442266 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs6463758 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs6482468 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs6484787 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs6486109 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs648831 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs6496050 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs6508358 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs6550834 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs6567160 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs6570505 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs6581626 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs659418 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs66930764 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs6693113 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs6693667 | 0.335 | 0.151 | 0.026 |
|  |  | 144160 | rs6714546 | 0.313 | 0.151 | 0.038 |
|  |  | 144160 | rs6724911 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs6734579 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs6739701 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs6740086 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs67551338 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs6761320 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs6762578 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs6762851 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs6802104 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs6821305 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs6824748 | 0.334 | 0.152 | 0.028 |
|  |  | 144160 | rs686489 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs6872083 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs6874142 | 0.316 | 0.151 | 0.036 |
|  |  | 144160 | rs6889138 | 0.319 | 0.151 | 0.034 |
|  |  | 144160 | rs6902771 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs6906411 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs6919321 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs6938592 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs6950680 | 0.319 | 0.151 | 0.034 |
|  |  | 144160 | rs6956736 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs6960257 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs6962887 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs7027509 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs7030316 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs7031064 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs703998 | 0.339 | 0.151 | 0.024 |
|  |  | 144160 | rs704660 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs7090067 | 0.336 | 0.151 | 0.026 |
|  |  | 144160 | rs71356070 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs71385734 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs71472903 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs71499905 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs7208285 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs7221345 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs7223535 | 0.307 | 0.151 | 0.042 |
|  |  | 144160 | rs723149 | 0.314 | 0.151 | 0.037 |
|  |  | 144160 | rs7235010 | 0.360 | 0.151 | 0.017 |
|  |  | 144160 | rs72656010 | 0.342 | 0.151 | 0.024 |
|  |  | 144160 | rs72722756 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs72742475 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs72755233 | 0.332 | 0.152 | 0.029 |
|  |  | 144160 | rs72776502 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs72800392 | 0.307 | 0.151 | 0.042 |
|  |  | 144160 | rs72801818 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs72843872 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs72887152 | 0.329 | 0.151 | 0.030 |
|  |  | 144160 | rs72891014 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs72904749 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs72931083 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs7293204 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs7295354 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs72976986 | 0.321 | 0.151 | 0.033 |
|  |  | 144160 | rs7299310 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs73125634 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs73148102 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs7319045 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs73259805 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs7330667 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs73453871 | 0.315 | 0.150 | 0.036 |
|  |  | 144160 | rs734764 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs74187143 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs7430034 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs743760 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs745749 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs74590624 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs7468898 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs747680 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs75076724 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs75091181 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs7516464 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs7524908 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs7532266 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs753602 | 0.329 | 0.151 | 0.030 |
|  |  | 144160 | rs75475720 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs7571231 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs7585767 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs7593987 | 0.333 | 0.151 | 0.028 |
|  |  | 144160 | rs7599488 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs76156143 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs76157805 | 0.331 | 0.152 | 0.029 |
|  |  | 144160 | rs7621604 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs76359852 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs76364830 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs7641322 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs7651940 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs76604417 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs768023 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs7681267 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs7688346 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs76895963 | 0.343 | 0.152 | 0.024 |
|  |  | 144160 | rs7697556 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs76997372 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs7705189 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs77124518 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs77216358 | 0.320 | 0.151 | 0.035 |
|  |  | 144160 | rs7744288 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs7753558 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs77672559 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs7774592 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs77797953 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs78051210 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs7814625 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs7816131 | 0.331 | 0.151 | 0.029 |
|  |  | 144160 | rs78198962 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs78760367 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs78805413 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs78817479 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs7908715 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | rs7911018 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs79112217 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs7916821 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs79378907 | 0.336 | 0.151 | 0.026 |
|  |  | 144160 | rs7952436 | 0.326 | 0.152 | 0.032 |
|  |  | 144160 | rs7968682 | 0.328 | 0.152 | 0.031 |
|  |  | 144160 | rs7974437 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs79749090 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs798488 | 0.357 | 0.151 | 0.018 |
|  |  | 144160 | rs79883557 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs8006145 | 0.320 | 0.151 | 0.034 |
|  |  | 144160 | rs8019890 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs8023451 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs8029053 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs8035987 | 0.334 | 0.151 | 0.027 |
|  |  | 144160 | rs8074840 | 0.327 | 0.151 | 0.030 |
|  |  | 144160 | rs8112355 | 0.337 | 0.151 | 0.025 |
|  |  | 144160 | rs8125976 | 0.318 | 0.151 | 0.035 |
|  |  | 144160 | rs822530 | 0.319 | 0.151 | 0.035 |
|  |  | 144160 | rs832552 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs862041 | 0.335 | 0.151 | 0.027 |
|  |  | 144160 | rs876122 | 0.317 | 0.151 | 0.036 |
|  |  | 144160 | rs880090 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs893819 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs903347 | 0.323 | 0.151 | 0.033 |
|  |  | 144160 | rs9300607 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs933561 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs9359128 | 0.326 | 0.151 | 0.031 |
|  |  | 144160 | rs9365939 | 0.331 | 0.151 | 0.028 |
|  |  | 144160 | rs9367296 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs9379084 | 0.337 | 0.151 | 0.026 |
|  |  | 144160 | rs9391254 | 0.340 | 0.151 | 0.025 |
|  |  | 144160 | rs941972 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs9435731 | 0.331 | 0.151 | 0.029 |
|  |  | 144160 | rs9442571 | 0.324 | 0.151 | 0.033 |
|  |  | 144160 | rs9496369 | 0.308 | 0.152 | 0.042 |
|  |  | 144160 | rs9575875 | 0.327 | 0.151 | 0.031 |
|  |  | 144160 | rs9607978 | 0.328 | 0.151 | 0.030 |
|  |  | 144160 | rs9634212 | 0.318 | 0.152 | 0.036 |
|  |  | 144160 | rs9693857 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs9696458 | 0.330 | 0.151 | 0.029 |
|  |  | 144160 | rs9747062 | 0.332 | 0.151 | 0.028 |
|  |  | 144160 | rs9803993 | 0.314 | 0.151 | 0.037 |
|  |  | 144160 | rs9809116 | 0.312 | 0.151 | 0.039 |
|  |  | 144160 | rs9824877 | 0.322 | 0.151 | 0.033 |
|  |  | 144160 | rs9826470 | 0.329 | 0.151 | 0.030 |
|  |  | 144160 | rs985344 | 0.325 | 0.151 | 0.031 |
|  |  | 144160 | rs9880232 | 0.333 | 0.151 | 0.027 |
|  |  | 144160 | rs989393 | 0.321 | 0.151 | 0.034 |
|  |  | 144160 | rs9910161 | 0.329 | 0.151 | 0.029 |
|  |  | 144160 | rs9974406 | 0.324 | 0.151 | 0.032 |
|  |  | 144160 | rs9988728 | 0.325 | 0.151 | 0.032 |
|  |  | 144160 | All | 0.325 | 0.151 | 0.031 |

**Table S4 Casual effects between Height and Testicular cancer in cohort 1,2.**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Cohort** | **Method** | **Beta** | **Se** | **i2(%)** | **Q\_pvalue** | **p\_difference** | **Egger\_intercept** | **F\_Mean(min-max)** | **F\_pow\_beta\_se** | **Power** |
| Cohort 1 | IVW | 0.325 | 0.151 | 8.177 | 0.070 | >0.05 | 0.535 | 86.583 (14.906-666.548) | 70.345 | 0.618 |
|  | Con\_Mix | 0.755 | 0.209 |  |  |  |  |  |  |  |
|  | RAPS | 0.362 | 0.160 |  |  |  |  |  |  |  |
|  | dIVW | 0.328 | 0.153 |  |  |  |  |  |  |  |
|  | Con\_ML | 0.328 | 0.156 |  |  |  |  |  |  |  |
|  | BWMR | 0.328 | 0.151 |  |  |  |  |  |  |  |
| Cohort 2 | IVW | 0.284 | 0.133 | 9.477 | 0.032 | >0.05 | 0.412 | 63.840(10.084-320.898) | 125.458 | 0.636 |
|  | Con\_Mix | 0.410 | 0.184 |  |  |  |  |  |  |  |
|  | RAPS | 0.278 | 0.137 |  |  |  |  |  |  |  |
|  | dIVW | 0.286 | 0.134 |  |  |  |  |  |  |  |
|  | Con\_ML | 0.273 | 0.146 |  |  |  |  |  |  |  |
|  | BWMR | 0.288 | 0.134 |  |  |  |  |  |  |  |

**Table S5 Reverse MR analysis between Height and Testicular cancer in cohort 1,2.**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cohort** | **Method** | **nsnp** | **Beta** | **Se** | **pvalue** |
| Cohort 1 | IVW | 2 | 3.24E-03 | 0.011 | 0.759 |
|  | BWMR | 2 | 2.25E-03 | 0.010 | 0.825 |
|  | d\_IVW | 2 | 3.31E-03 | 0.007 | 0.655 |
|  | Con\_ML | 2 | 3.50E-03 | 0.004 | 0.335 |
|  | Con\_Mix | 2 | 2.07E-02 | 0.010 | 0.510 |
| Cohort 2 | IVW | 6 | 9.27E-04 | 0.004 | 0.834 |
|  | BWMR | 6 | 8.54E-04 | 0.004 | 0.835 |
|  | d\_IVW | 6 | 9.43E-04 | 0.004 | 0.822 |
|  | Con\_ML | 6 | -3.42E-05 | 0.002 | 0.985 |
|  | Con\_Mix | 6 | -4.01E-03 | 0.005 | 0.999 |

**Table S6 Top 10 fo Functional enrichment of Height-TC-associated genes.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **ID** | **Description** | **GeneRatio** | **pvalue** | **p.adjust** | **qvalue** | **Count** | **Enrichment Score** |
| BP | GO:0061448 | connective tissue development | 32/474 | 5.81E-14 | 2.35E-10 | 2.05E-10 | 32 | 13.236 |
| GO:0051216 | cartilage development | 27/474 | 3.68E-13 | 7.43E-10 | 6.49E-10 | 27 | 12.434 |
| GO:0002062 | chondrocyte differentiation | 18/474 | 1.64E-10 | 2.21E-07 | 1.93E-07 | 18 | 9.785 |
| GO:0048705 | skeletal system morphogenesis | 24/474 | 1.99E-09 | 2.01E-06 | 1.76E-06 | 24 | 8.700 |
| GO:0071560 | cellular response to transforming growth factor beta stimulus | 25/474 | 5.57E-09 | 4.50E-06 | 3.93E-06 | 25 | 8.254 |
| GO:0071559 | response to transforming growth factor beta | 25/474 | 9.02E-09 | 6.07E-06 | 5.31E-06 | 25 | 8.045 |
| GO:0032330 | regulation of chondrocyte differentiation | 11/474 | 8.74E-08 | 5.05E-05 | 4.41E-05 | 11 | 7.058 |
| GO:0007179 | transforming growth factor beta receptor signaling pathway | 20/474 | 1.61E-07 | 7.30E-05 | 6.38E-05 | 20 | 6.794 |
| GO:0048568 | embryonic organ development | 31/474 | 1.63E-07 | 7.30E-05 | 6.38E-05 | 31 | 6.789 |
| GO:0061035 | regulation of cartilage development | 12/474 | 2.73E-07 | 1.11E-04 | 9.66E-05 | 12 | 6.563 |
| CC | GO:0062023 | collagen-containing extracellular matrix | 30/485 | 3.11E-07 | 1.32E-04 | 1.24E-04 | 30 | 6.507 |
| GO:0001527 | microfibril | 5/485 | 6.31E-06 | 1.34E-03 | 1.26E-03 | 5 | 5.200 |
| GO:0071141 | SMAD protein complex | 4/485 | 6.98E-05 | 9.84E-03 | 9.28E-03 | 4 | 4.156 |
| GO:0000803 | sex chromosome | 5/485 | 3.93E-04 | 4.16E-02 | 3.92E-02 | 5 | 3.405 |
| GO:0005667 | transcription regulator complex | 22/485 | 6.94E-04 | 5.87E-02 | 5.54E-02 | 22 | 3.159 |
| GO:0031252 | cell leading edge | 22/485 | 9.20E-04 | 6.49E-02 | 6.12E-02 | 22 | 3.036 |
| GO:0005938 | cell cortex | 17/485 | 1.88E-03 | 1.13E-01 | 1.07E-01 | 17 | 2.727 |
| GO:0031253 | cell projection membrane | 18/485 | 2.66E-03 | 1.25E-01 | 1.18E-01 | 18 | 2.575 |
| GO:0005604 | basement membrane | 8/485 | 2.67E-03 | 1.25E-01 | 1.18E-01 | 8 | 2.574 |
| GO:0090575 | RNA polymerase II transcription regulator complex | 11/485 | 3.22E-03 | 1.36E-01 | 1.29E-01 | 11 | 2.492 |
| MF | GO:0005201 | extracellular matrix structural constituent | 19/476 | 1.14E-07 | 7.75E-05 | 6.94E-05 | 19 | 6.944 |
| GO:0070411 | I-SMAD binding | 5/476 | 1.89E-05 | 4.13E-03 | 3.70E-03 | 5 | 4.724 |
| GO:0001228 | DNA-binding transcription activator activity, RNA polymerase II-specific | 28/476 | 1.91E-05 | 4.13E-03 | 3.70E-03 | 28 | 4.719 |
| GO:0001216 | DNA-binding transcription activator activity | 28/476 | 2.43E-05 | 4.13E-03 | 3.70E-03 | 28 | 4.615 |
| GO:0046332 | SMAD binding | 10/476 | 3.61E-05 | 4.92E-03 | 4.41E-03 | 10 | 4.442 |
| GO:0019902 | phosphatase binding | 16/476 | 5.41E-05 | 6.14E-03 | 5.49E-03 | 16 | 4.267 |
| GO:0043560 | insulin receptor substrate binding | 4/476 | 1.27E-04 | 1.08E-02 | 9.69E-03 | 4 | 3.896 |
| GO:0097493 | structural molecule activity conferring elasticity | 4/476 | 1.27E-04 | 1.08E-02 | 9.69E-03 | 4 | 3.896 |
| GO:0042578 | phosphoric ester hydrolase activity | 22/476 | 2.41E-04 | 1.65E-02 | 1.48E-02 | 22 | 3.618 |
| GO:0005158 | insulin receptor binding | 5/476 | 2.62E-04 | 1.65E-02 | 1.48E-02 | 5 | 3.582 |
| KEGG | hsa05166 | Human T-cell leukemia virus 1 infection | 21/226 | 9.02E-08 | 2.46E-05 | 1.68E-05 | 21 | 7.045 |
| hsa04935 | Growth hormone synthesis, secretion and action | 13/226 | 6.91E-06 | 9.43E-04 | 6.44E-04 | 13 | 5.160 |
| hsa04931 | Insulin resistance | 12/226 | 1.12E-05 | 9.48E-04 | 6.47E-04 | 12 | 4.950 |
| hsa04926 | Relaxin signaling pathway | 13/226 | 1.39E-05 | 9.48E-04 | 6.47E-04 | 13 | 4.857 |
| hsa01522 | Endocrine resistance | 11/226 | 2.40E-05 | 1.10E-03 | 7.49E-04 | 11 | 4.620 |
| hsa04218 | Cellular senescence | 14/226 | 2.41E-05 | 1.10E-03 | 7.49E-04 | 14 | 4.618 |
| hsa04933 | AGE-RAGE signaling pathway in diabetic complications | 11/226 | 2.90E-05 | 1.13E-03 | 7.72E-04 | 11 | 4.538 |
| hsa05210 | Colorectal cancer | 10/226 | 4.20E-05 | 1.36E-03 | 9.30E-04 | 10 | 4.376 |
| hsa04022 | cGMP-PKG signaling pathway | 14/226 | 4.49E-05 | 1.36E-03 | 9.30E-04 | 14 | 4.348 |
| hsa05165 | Human papillomavirus infection | 21/226 | 5.03E-05 | 1.37E-03 | 9.38E-04 | 21 | 4.298 |

**Table S7 Overlapping Gene Results from SMR Analysis in Cohort 1.**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GeneSymbol** | **Probe Chr** | **Probe \_bp** | **Se** | **pvalue** | **Or** | **Or\_lci95** | **Or\_uci95** | **pvalue\_ HEIDI** | **snp\_ HEIDI** | **TopSNP** | **TopSNP\_ F** |
| ADTRP | 6 | 11759783 | 0.267 | 3.07E-02 | 1.782 | 1.055 | 3.01 | 0.292 | 7 | rs149423183 | 225.36 |
| ARL10 | 5 | 175810668 | 0.689 | 8.47E-03 | 6.137 | 1.59 | 23.69 | 0.485 | 7 | rs73803606 | 203.325 |
| BCAS4 | 20 | 49452572 | 0.153 | 3.35E-02 | 0.723 | 0.536 | 0.975 | 0.583 | 20 | rs6702 | 2544.897 |
| BDH2 | 4 | 104010816 | 0.118 | 5.31E-06 | 0.583 | 0.463 | 0.736 | 0.738 | 20 | rs2711897 | 2173.07 |
| CCDC157 | 22 | 30763635 | 0.613 | 3.34E-02 | 3.683 | 1.108 | 12.249 | 0.562 | 16 | rs4820005 | 175.246 |
| CENPE | 4 | 104073264 | 0.977 | 2.65E-03 | 0.053 | 0.008 | 0.36 | 0.185 | 20 | rs17033423 | 60.035 |
| CES4A | 16 | 67033076 | 0.723 | 2.10E-03 | 9.236 | 2.24 | 38.08 | 0.157 | 20 | rs12926574 | 97.192 |
| FAM22D | 10 | 89123938 | 0.137 | 2.63E-02 | 1.354 | 1.036 | 1.77 | 0.863 | 5 | rs2986492 | 616.473 |
| GLCCI1 | 7 | 8071163 | 0.702 | 4.85E-02 | 3.992 | 1.009 | 15.791 | 0.794 | 20 | rs60466842 | 163.785 |
| GORASP1 | 3 | 39144002 | 0.747 | 1.62E-02 | 0.166 | 0.038 | 0.718 | 0.987 | 19 | rs4676592 | 91.727 |
| GOT2 | 16 | 58754648 | 0.288 | 3.50E-02 | 0.544 | 0.309 | 0.958 | 0.81 | 20 | rs1657179 | 734.579 |
| HEATR3 | 16 | 50120075 | 0.11 | 8.98E-04 | 1.44 | 1.161 | 1.786 | 0.196 | 20 | rs7186889 | 7108.792 |
| IFIT2 | 10 | 91065372 | 0.944 | 3.13E-02 | 7.63 | 1.2 | 48.527 | 0.412 | 8 | rs2102698 | 126.369 |
| IFT74 | 9 | 27004982 | 0.564 | 3.59E-02 | 3.268 | 1.081 | 9.88 | 0.911 | 20 | rs10967625 | 252.481 |
| KIAA1191 | 5 | 175781017 | 0.426 | 7.80E-03 | 3.107 | 1.348 | 7.162 | 0.145 | 7 | rs73803606 | 526.153 |
| KIAA1551 | 12 | 32129171 | 0.185 | 2.10E-02 | 1.532 | 1.067 | 2.201 | 0.796 | 20 | rs1900664 | 1613.049 |
| KRT8P46 | 4 | 103650615 | 0.108 | 3.87E-04 | 1.466 | 1.187 | 1.81 | 0.319 | 20 | rs223490 | 1079.289 |
| LRRC37A15P | 4 | 103650154 | 0.095 | 3.79E-04 | 1.403 | 1.164 | 1.691 | 0.219 | 20 | rs223490 | 1456.458 |
| LRRC8B | 1 | 90026909 | 0.121 | 4.76E-02 | 0.786 | 0.62 | 0.997 | 0.597 | 20 | rs359943 | 5245.272 |
| LZTR1 | 22 | 21343539 | 0.151 | 2.98E-02 | 0.72 | 0.536 | 0.968 | 0.713 | 9 | rs739524 | 2231.296 |
| MAGEF1 | 3 | 184428996 | 0.24 | 1.67E-02 | 0.563 | 0.351 | 0.901 | 0.22 | 20 | rs7428709 | 1162.219 |
| MAP2K1 | 15 | 66731902 | 0.333 | 1.68E-03 | 0.351 | 0.183 | 0.675 | 0.257 | 20 | rs11637949 | 220.634 |
| MARVELD1 | 10 | 99475418 | 0.728 | 1.38E-02 | 6.005 | 1.442 | 25.005 | 0.387 | 17 | rs75595199 | 96.755 |
| MKI67IP | 2 | 122489510 | 0.267 | 1.10E-02 | 1.971 | 1.168 | 3.326 | 0.201 | 20 | rs1056014 | 893.352 |
| MPI | 15 | 75187072 | 0.221 | 4.76E-03 | 1.868 | 1.21 | 2.884 | 0.363 | 20 | rs11072518 | 1204.93 |
| PFKFB3 | 10 | 6232188 | 0.483 | 2.99E-02 | 0.35 | 0.136 | 0.903 | 0.146 | 13 | rs2794983 | 136.533 |
| PHC2 | 1 | 33842938 | 0.44 | 1.82E-02 | 2.828 | 1.193 | 6.7 | 0.892 | 20 | rs1130800 | 353.624 |
| PMF1 | 1 | 156197829 | 0.539 | 2.18E-03 | 0.191 | 0.067 | 0.551 | 0.193 | 9 | rs2758600 | 168.849 |
| PRR13 | 12 | 53837909 | 0.386 | 6.83E-03 | 2.837 | 1.333 | 6.042 | 0.748 | 20 | rs11170558 | 365.084 |
| PSMD10P1 | 20 | 49530608 | 0.527 | 4.41E-02 | 2.889 | 1.029 | 8.116 | 0.373 | 20 | rs6702 | 38.514 |
| RDH10 | 8 | 74222181 | 0.69 | 4.53E-02 | 3.976 | 1.029 | 15.363 | 0.571 | 20 | rs7819550 | 140.679 |
| RP11-10L12.2 | 4 | 103673178 | 0.158 | 4.53E-04 | 1.739 | 1.276 | 2.368 | 0.178 | 20 | rs223490 | 354.682 |
| RP11-266L9.6 | 16 | 25083429 | 0.302 | 1.13E-02 | 0.465 | 0.257 | 0.841 | 0.738 | 8 | rs62033343 | 103.015 |
| RP1-130H16.16 | 22 | 30772396 | 0.432 | 3.56E-02 | 2.481 | 1.063 | 5.791 | 0.195 | 16 | rs5753106 | 64.532 |
| RP11-638I2.9 | 14 | 100806530 | 0.282 | 5.00E-02 | 0.575 | 0.331 | 0.999 | 0.983 | 18 | rs941923 | 139.576 |
| RP11-7O11.3 | 1 | 44411132 | 0.302 | 2.06E-02 | 2.012 | 1.113 | 3.635 | 0.123 | 20 | rs12127737 | 92.413 |
| SAR1B | 5 | 133960897 | 0.332 | 2.94E-02 | 0.485 | 0.253 | 0.93 | 0.918 | 20 | rs59581994 | 376.711 |
| SIRT1 | 10 | 69661287 | 0.136 | 3.81E-02 | 0.755 | 0.578 | 0.985 | 0.89 | 18 | rs10762188 | 1588.653 |
| SLC9B2 | 4 | 103974005 | 0.924 | 5.88E-05 | 40.869 | 6.687 | 249.767 | 0.398 | 20 | rs2711897 | 70.621 |
| SNORA33 | 6 | 133138422 | 0.28 | 2.59E-02 | 1.866 | 1.078 | 3.231 | 0.149 | 20 | rs2236381 | 655.664 |
| SNORD100 | 6 | 133137978 | 0.323 | 2.63E-02 | 2.049 | 1.088 | 3.857 | 0.208 | 20 | rs2236381 | 402.163 |
| SRSF8 | 11 | 94802222 | 0.494 | 3.01E-02 | 0.342 | 0.13 | 0.902 | 0.679 | 6 | rs7130686 | 208.917 |
| VRK1 | 14 | 97330850 | 0.407 | 4.69E-02 | 2.244 | 1.011 | 4.981 | 0.186 | 20 | rs10873477 | 165.307 |
| ZFP82 | 19 | 36891790 | 0.134 | 3.04E-02 | 0.749 | 0.576 | 0.973 | 0.204 | 20 | rs56378871 | 3810.343 |

**Table S8 Overlapping Gene Results from SMR Analysis in Cohort 2.**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **GeneSymbol** | **Probe Chr** | **Probe \_bp** | **Se** | **pvalue** | **Or** | **Or\_lci95** | **Or\_uci95** | **pvalue\_HEIDI** | **Nsnp\_ HEIDI** | **TopSNP** | **TopSNP\_ F** |
| ADTRP | 6 | 11759783 | 0.202 | 8.62E-03 | 1.7 | 1.144 | 2.526 | 0.037 | 7 | rs149423183 | 225.36 |
| ARL10 | 5 | 175810668 | 0.472 | 4.02E-02 | 0.38 | 0.15 | 0.958 | 0.073 | 7 | rs73803606 | 203.325 |
| BCAS4 | 20 | 49452572 | 0.133 | 1.50E-02 | 1.38 | 1.065 | 1.79 | 0.573 | 20 | rs6702 | 2544.897 |
| BDH2 | 4 | 104010816 | 0.1 | 2.21E-07 | 0.597 | 0.491 | 0.726 | 0.38 | 20 | rs2711897 | 2173.07 |
| CCDC157 | 22 | 30763635 | 0.433 | 1.67E-02 | 0.355 | 0.152 | 0.829 | 0.322 | 16 | rs4820005 | 175.246 |
| CENPE | 4 | 104073264 | 0.892 | 4.00E-03 | 0.077 | 0.013 | 0.441 | 0.047 | 20 | rs17033423 | 60.035 |
| CES4A | 16 | 67033076 | 0.58 | 1.50E-02 | 0.244 | 0.078 | 0.761 | 0.612 | 20 | rs12926574 | 97.192 |
| FAM22D | 10 | 89123938 | 0.146 | 3.06E-02 | 0.73 | 0.549 | 0.971 | 0.856 | 9 | rs72809943 | 419.088 |
| GLCCI1 | 7 | 8071163 | 0.472 | 4.29E-02 | 2.599 | 1.031 | 6.551 | 0.843 | 20 | rs60466842 | 163.785 |
| GORASP1 | 3 | 39144002 | 0.701 | 2.56E-02 | 0.209 | 0.053 | 0.826 | 0.775 | 20 | rs4676592 | 91.727 |
| GOT2 | 16 | 58754648 | 0.237 | 7.58E-03 | 0.532 | 0.334 | 0.845 | 0.219 | 20 | rs1657179 | 734.579 |
| HEATR3 | 16 | 50120075 | 0.082 | 3.01E-03 | 1.275 | 1.086 | 1.498 | 0.552 | 20 | rs7186889 | 7108.792 |
| IFIT2 | 10 | 91065372 | 0.6 | 3.92E-02 | 0.29 | 0.09 | 0.941 | 0.265 | 8 | rs2102698 | 126.369 |
| IFT74 | 9 | 27004982 | 0.419 | 1.53E-04 | 0.205 | 0.09 | 0.466 | 0.595 | 20 | rs10967625 | 252.481 |
| KIAA1191 | 5 | 175781017 | 0.293 | 3.90E-02 | 0.546 | 0.307 | 0.97 | 0.01 | 7 | rs73803606 | 526.153 |
| KIAA1551 | 12 | 32129171 | 0.146 | 1.19E-02 | 1.445 | 1.085 | 1.924 | 0.972 | 20 | rs1900664 | 1613.049 |
| KRT8P46 | 4 | 103650615 | 0.09 | 1.29E-06 | 1.549 | 1.298 | 1.85 | 0.026 | 20 | rs223490 | 1079.289 |
| LRRC37A15P | 4 | 103650154 | 0.08 | 1.20E-06 | 1.473 | 1.26 | 1.723 | 0.013 | 20 | rs223490 | 1456.458 |
| LRRC8B | 1 | 90026909 | 0.093 | 4.26E-02 | 1.208 | 1.006 | 1.449 | 0.984 | 20 | rs359943 | 5245.272 |
| LZTR1 | 22 | 21343539 | 0.123 | 6.35E-03 | 0.714 | 0.56 | 0.909 | 0.368 | 9 | rs739524 | 2231.296 |
| MAGEF1 | 3 | 184428996 | 0.188 | 1.11E-02 | 1.611 | 1.115 | 2.328 | 0.635 | 20 | rs7428709 | 1162.219 |
| MAP2K1 | 15 | 66731902 | 0.293 | 4.99E-02 | 0.563 | 0.317 | 0.999 | 0.004 | 20 | rs11637949 | 220.634 |
| MARVELD1 | 10 | 99475418 | 0.53 | 4.75E-02 | 2.858 | 1.012 | 8.072 | 0.024 | 19 | rs4919136 | 109.566 |
| MKI67IP | 2 | 122489510 | 0.196 | 2.15E-02 | 0.637 | 0.434 | 0.936 | 0.622 | 20 | rs1056014 | 893.352 |
| MPI | 15 | 75187072 | 0.189 | 3.82E-02 | 1.481 | 1.022 | 2.146 | 0.798 | 20 | rs6495127 | 1215.769 |
| PFKFB3 | 10 | 6232188 | 0.44 | 4.65E-02 | 0.417 | 0.176 | 0.986 | 0.583 | 12 | rs2794983 | 136.533 |
| PHC2 | 1 | 33842938 | 0.329 | 3.07E-02 | 0.491 | 0.258 | 0.936 | 0.875 | 20 | rs1130800 | 353.624 |
| PMF1 | 1 | 156197829 | 0.461 | 1.03E-03 | 0.22 | 0.089 | 0.543 | 0.111 | 9 | rs2758600 | 168.849 |
| PRR13 | 12 | 53837909 | 0.316 | 4.30E-03 | 2.467 | 1.327 | 4.587 | 0.82 | 20 | rs11170558 | 365.084 |
| PSMD10P1 | 20 | 49530608 | 0.465 | 2.34E-02 | 0.349 | 0.14 | 0.867 | 0.999 | 18 | rs6702 | 38.514 |
| RDH10 | 8 | 74222181 | 0.527 | 3.42E-02 | 0.328 | 0.117 | 0.92 | 0.797 | 20 | rs7819550 | 140.679 |
| RP11-10L12.2 | 4 | 103673178 | 0.134 | 2.16E-06 | 1.884 | 1.45 | 2.448 | 0.205 | 20 | rs223490 | 354.682 |
| RP11-266L9.6 | 16 | 25083429 | 0.252 | 1.02E-02 | 1.911 | 1.166 | 3.131 | 0.583 | 8 | rs62033343 | 103.015 |
| RP1-130H16.16 | 22 | 30772396 | 0.309 | 1.13E-02 | 0.457 | 0.249 | 0.838 | 0.304 | 14 | rs5753106 | 64.532 |
| RP11-638I2.9 | 14 | 100806530 | 0.213 | 3.20E-02 | 0.633 | 0.417 | 0.961 | 0.964 | 20 | rs941923 | 139.576 |
| RP11-7O11.3 | 1 | 44411132 | 0.257 | 1.27E-02 | 1.897 | 1.146 | 3.138 | 0.985 | 20 | rs12127737 | 92.413 |
| SAR1B | 5 | 133960897 | 0.326 | 2.61E-02 | 0.485 | 0.256 | 0.917 | 0.067 | 8 | rs246344 | 415.362 |
| SIRT1 | 10 | 69661287 | 0.114 | 2.85E-02 | 0.779 | 0.623 | 0.974 | 0.163 | 16 | rs10762188 | 1588.653 |
| SLC9B2 | 4 | 103974005 | 0.802 | 9.44E-06 | 34.932 | 7.251 | 168.287 | 0.4 | 20 | rs2711897 | 70.621 |
| SNORA33 | 6 | 133138422 | 0.227 | 3.59E-02 | 1.609 | 1.032 | 2.51 | 0.054 | 20 | rs2236381 | 655.664 |
| SNORD100 | 6 | 133137978 | 0.261 | 3.63E-02 | 1.728 | 1.036 | 2.884 | 0.032 | 20 | rs2236381 | 402.163 |
| SRSF8 | 11 | 94802222 | 0.404 | 1.55E-02 | 0.376 | 0.17 | 0.83 | 0.511 | 5 | rs7130686 | 208.917 |
| VRK1 | 14 | 97330850 | 0.344 | 2.22E-02 | 2.196 | 1.119 | 4.31 | 0.738 | 20 | rs10873477 | 165.307 |
| ZFP82 | 19 | 36891790 | 0.106 | 2.65E-02 | 0.79 | 0.641 | 0.973 | 0.108 | 20 | rs56378871 | 3810.343 |