**Table s2.** Three gene-based Association Testing Results for genes associated with guttate psoriasis in Exome\_ Asian Array

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SetID** | **N.Marker.All** | **N.Marker.Test** | **MAC** | **m** | **P.skat** | **P.skato** | **P.burden** |
| **SLC5A4** | 16 | 12 | 187 | 119 | 1.08E-03 | 1.13E-03 | 1.11E-03 |
| **C1orf116** | 15 | 12 | 134 | 94 | 2.35E-02 | 7.57E-03 | 4.70E-03 |
| **TM2D2** | 3 | 3 | 27 | 27 | 1.28E-05 | 4.13E-05 | 4.25E-05 |
| **FAM64A** | 4 | 3 | 10 | 10 | 2.70E-05 | 3.87E-05 | 3.37E-04 |
| **PSG5** | 3 | 3 | 41 | 40 | 3.10E-03 | 1.83E-04 | 9.86E-05 |
| **LEP** | 2 | 2 | 37 | 37 | 4.18E-04 | 1.79E-04 | 1.75E-04 |
| **GJA10** | 3 | 3 | 27 | 27 | 1.03E-03 | 6.99E-04 | 2.20E-04 |
| **RMDN2** | 11 | 9 | 120 | 120 | 3.71E-02 | 3.43E-04 | 1.45E-04 |
| **FANCE** | 5 | 5 | 28 | 28 | 6.07E-04 | 8.28E-04 | 6.88E-04 |
| **TRIM15** | 3 | 3 | 51 | 28 | 1.02E-02 | 1.07E-02 | 1.37E-02 |
| **MED12L** | 7 | 6 | 64 | 64 | 2.54E-02 | 1.34E-03 | 6.59E-04 |
| **SMYD1** | 6 | 4 | 76 | 75 | 6.67E-03 | 1.32E-03 | 8.02E-04 |
| **PCDHGB1** | 7 | 6 | 126 | 111 | 2.60E-02 | 5.32E-03 | 2.80E-03 |
| **AXIN1** | 6 | 3 | 6 | 6 | 1.57E-02 | 3.19E-03 | 1.21E-03 |
| **ATP2A3** | 7 | 5 | 10 | 10 | 2.21E-03 | 1.93E-03 | 2.16E-03 |
| **ZNF710** | 4 | 3 | 17 | 17 | 3.90E-03 | 1.17E-03 | 8.48E-04 |
| **COQ7** | 4 | 2 | 33 | 33 | 1.65E-03 | 1.62E-03 | 6.69E-04 |
| **SLX4IP** | 4 | 4 | 41 | 31 | 2.79E-02 | 1.11E-02 | 7.97E-03 |
| **SCG5** | 4 | 4 | 99 | 98 | 1.33E-03 | 1.62E-03 | 1.71E-03 |
| **TGM3** | 6 | 4 | 33 | 33 | 3.61E-03 | 4.14E-03 | 1.65E-03 |
| **RASSF7** | 6 | 6 | 36 | 36 | 5.06E-03 | 3.29E-03 | 2.07E-03 |
| **ADAM7** | 8 | 6 | 84 | 84 | 6.17E-03 | 3.23E-03 | 1.79E-03 |
| **RBM43** | 3 | 3 | 52 | 51 | 2.10E-02 | 3.39E-03 | 1.98E-03 |
| **SUN1** | 6 | 5 | 190 | 188 | 4.66E-02 | 2.61E-03 | 1.31E-03 |
| **INCA1** | 4 | 4 | 69 | 68 | 3.45E-03 | 3.22E-03 | 2.37E-03 |
| **MARVELD2** | 3 | 3 | 85 | 85 | 1.38E-02 | 1.98E-03 | 1.53E-03 |
| **TVP23A** | 3 | 3 | 98 | 95 | 1.61E-02 | 3.80E-03 | 2.49E-03 |
| **SBK3** | 3 | 3 | 3 | 3 | 7.34E-03 | 7.34E-03 | 7.34E-03 |
| **CD200** | 2 | 2 | 3 | 3 | 7.34E-03 | 7.34E-03 | 7.34E-03 |
| **OR52A1** | 2 | 2 | 3 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **MGMT** | 3 | 2 | 114 | 57 | 3.09E-02 | 3.09E-02 | 3.09E-02 |
| **LETM2** | 6 | 4 | 37 | 36 | 7.53E-04 | 1.58E-03 | 5.34E-03 |
| **CDH1** | 6 | 5 | 26 | 26 | 2.58E-03 | 4.13E-03 | 3.26E-03 |
| **MURC** | 4 | 3 | 26 | 26 | 3.99E-03 | 4.65E-03 | 2.39E-03 |
| **GAL3ST3** | 4 | 4 | 80 | 78 | 1.09E-03 | 1.44E-03 | 4.49E-03 |
| **RFX7** | 4 | 3 | 11 | 11 | 3.06E-03 | 3.06E-03 | 4.59E-03 |
| **PLPP2** | 4 | 2 | 11 | 11 | 2.04E-03 | 2.04E-03 | 5.62E-03 |
| **CORO2A** | 11 | 8 | 58 | 58 | 1.96E-02 | 5.70E-03 | 2.89E-03 |
| **SON** | 18 | 12 | 83 | 83 | 1.99E-02 | 6.35E-03 | 3.10E-03 |
| **ZMYND10** | 4 | 4 | 55 | 55 | 1.24E-02 | 5.91E-03 | 3.15E-03 |
| **GDF10** | 2 | 2 | 32 | 32 | 1.33E-02 | 4.56E-03 | 1.93E-03 |
| **TAF6** | 2 | 2 | 9 | 9 | 6.71E-03 | 8.56E-03 | 5.09E-03 |
| **SUSD3** | 4 | 3 | 7 | 7 | 2.69E-03 | 2.69E-03 | 1.02E-02 |
| **TIA1** | 4 | 3 | 5 | 5 | 2.23E-03 | 2.23E-03 | 1.31E-02 |
| **RPAP2** | 3 | 2 | 7 | 7 | 1.50E-02 | 1.02E-02 | 7.19E-03 |
| **ESM1** | 2 | 2 | 5 | 5 | 2.23E-03 | 2.23E-03 | 1.31E-02 |
| **SIRT4** | 3 | 3 | 5 | 5 | 1.87E-02 | 1.87E-02 | 4.94E-03 |
| **ZNF416** | 3 | 2 | 5 | 5 | 9.01E-03 | 9.01E-03 | 6.30E-03 |
| **VSX1** | 3 | 2 | 5 | 5 | 9.01E-03 | 9.01E-03 | 6.30E-03 |
| **ZMYND8** | 6 | 3 | 53 | 53 | 2.08E-03 | 2.30E-03 | 4.51E-03 |
| **ENTPD3** | 8 | 7 | 77 | 62 | 3.53E-02 | 2.68E-02 | 1.56E-02 |
| **TMEM52B** | 5 | 4 | 47 | 47 | 2.46E-02 | 6.42E-03 | 3.92E-03 |
| **POMGNT1** | 9 | 6 | 27 | 27 | 2.62E-02 | 8.28E-03 | 3.99E-03 |
| **CCDC13** | 3 | 3 | 27 | 27 | 2.78E-03 | 2.60E-03 | 4.80E-03 |
| **BDKRB2** | 3 | 3 | 19 | 19 | 2.42E-02 | 7.32E-03 | 2.46E-03 |
| **APOBEC3D** | 2 | 2 | 14 | 14 | 6.92E-03 | 6.92E-03 | 3.86E-03 |
| **EYA1** | 3 | 2 | 14 | 13 | 4.64E-02 | 1.29E-02 | 3.93E-03 |
| **STARD6** | 5 | 5 | 82 | 81 | 2.75E-02 | 9.95E-03 | 5.44E-03 |
| **NR6A1** | 2 | 2 | 33 | 33 | 2.98E-02 | 6.32E-03 | 3.11E-03 |
| **HDLBP** | 3 | 2 | 22 | 22 | 5.57E-03 | 6.65E-03 | 5.28E-03 |
| **UNC119** | 3 | 2 | 22 | 22 | 1.55E-02 | 6.02E-03 | 4.80E-03 |
| **FAM151A** | 6 | 3 | 22 | 21 | 1.71E-02 | 8.20E-03 | 5.54E-03 |
| **SMPD1** | 9 | 8 | 97 | 95 | 1.14E-02 | 1.07E-02 | 7.39E-03 |
| **CD207** | 7 | 6 | 113 | 109 | 2.90E-02 | 1.20E-02 | 6.95E-03 |
| **GLIS3** | 13 | 11 | 113 | 113 | 2.98E-02 | 1.01E-02 | 5.22E-03 |
| **NCAM1** | 12 | 9 | 39 | 39 | 4.55E-02 | 9.53E-03 | 4.40E-03 |
| **TUBB1** | 5 | 2 | 51 | 51 | 2.51E-02 | 7.81E-03 | 5.10E-03 |
| **DNMT1** | 6 | 6 | 42 | 41 | 4.74E-02 | 1.29E-02 | 7.08E-03 |
| **KCNJ16** | 6 | 5 | 45 | 45 | 1.02E-02 | 9.26E-03 | 6.09E-03 |
| **GLB1L2** | 12 | 6 | 112 | 112 | 2.20E-02 | 9.76E-03 | 5.11E-03 |
| **IZUMO1R** | 4 | 4 | 86 | 86 | 3.14E-02 | 9.17E-03 | 5.52E-03 |
| **GNPTG** | 4 | 4 | 96 | 95 | 2.91E-02 | 9.33E-03 | 5.87E-03 |
| **CSNK1A1L** | 2 | 2 | 23 | 23 | 2.06E-02 | 8.76E-03 | 4.52E-03 |
| **ANKRD1** | 3 | 1 | 25 | 25 | 6.64E-03 | 6.64E-03 | 6.64E-03 |
| **INSL3** | 3 | 1 | 67 | 66 | 7.11E-03 | 7.11E-03 | 7.11E-03 |
| **CYP4A11** | 2 | 2 | 17 | 17 | 6.38E-03 | 8.52E-03 | 6.86E-03 |
| **NMUR2** | 6 | 4 | 68 | 68 | 1.26E-02 | 1.04E-02 | 6.40E-03 |
| **SPIRE1** | 2 | 2 | 12 | 12 | 9.62E-03 | 9.62E-03 | 5.36E-03 |
| **CST1** | 4 | 3 | 12 | 12 | 2.93E-03 | 3.81E-03 | 1.17E-02 |
| **UTP4** | 3 | 3 | 12 | 12 | 2.52E-02 | 1.36E-02 | 5.81E-03 |
| **ADAM8** | 12 | 11 | 283 | 233 | 2.53E-02 | 2.96E-02 | 2.18E-02 |
| **OR51D1** | 7 | 6 | 83 | 66 | 6.85E-03 | 1.21E-02 | 2.45E-02 |
| **PPP1R26** | 4 | 4 | 126 | 125 | 1.38E-02 | 1.18E-02 | 7.20E-03 |
| **NUFIP2** | 3 | 3 | 30 | 30 | 3.73E-02 | 1.10E-02 | 7.54E-03 |
| **DHX8** | 5 | 3 | 37 | 33 | 2.58E-02 | 1.97E-02 | 1.03E-02 |
| **TMEM129** | 4 | 3 | 28 | 28 | 4.21E-02 | 8.59E-03 | 4.63E-03 |
| **PIK3R5** | 8 | 6 | 58 | 57 | 3.74E-02 | 1.48E-02 | 8.37E-03 |
| **SRMS** | 11 | 8 | 100 | 100 | 7.63E-03 | 9.52E-03 | 8.43E-03 |
| **RAPSN** | 4 | 4 | 61 | 60 | 4.34E-02 | 1.42E-02 | 8.69E-03 |
| **C2orf47** | 2 | 2 | 34 | 34 | 7.36E-03 | 8.76E-03 | 6.85E-03 |
| **MROH5** | 2 | 2 | 49 | 49 | 9.13E-03 | 8.11E-03 | 7.60E-03 |
| **TNNT1** | 4 | 4 | 49 | 49 | 3.09E-02 | 1.28E-02 | 7.63E-03 |
| **MIB2** | 6 | 5 | 46 | 46 | 2.24E-02 | 9.87E-03 | 7.61E-03 |
| **RFX5** | 3 | 2 | 20 | 20 | 5.39E-03 | 5.39E-03 | 9.67E-03 |
| **OR51B6** | 4 | 4 | 37 | 37 | 3.43E-02 | 1.50E-02 | 8.24E-03 |
| **OR56B4** | 4 | 4 | 40 | 40 | 2.94E-02 | 1.26E-02 | 8.37E-03 |
| **GRIK3** | 5 | 5 | 36 | 36 | 3.59E-02 | 1.22E-02 | 8.32E-03 |
| **CCDC127** | 3 | 3 | 65 | 65 | 3.89E-03 | 4.39E-03 | 1.05E-02 |
| **PLCXD3** | 2 | 2 | 10 | 10 | 5.99E-03 | 5.99E-03 | 1.48E-02 |
| **ZNF583** | 2 | 1 | 10 | 10 | 1.04E-02 | 1.04E-02 | 1.04E-02 |
| **PRR19** | 3 | 3 | 10 | 10 | 1.29E-02 | 1.05E-02 | 1.11E-02 |
| **LINGO2** | 4 | 4 | 54 | 54 | 1.25E-02 | 1.34E-02 | 9.64E-03 |
| **AP5B1** | 4 | 3 | 62 | 60 | 9.86E-03 | 1.13E-02 | 1.25E-02 |
| **WISP1** | 9 | 8 | 23 | 23 | 1.90E-02 | 1.24E-02 | 9.95E-03 |
| **ERI3** | 2 | 1 | 15 | 15 | 9.35E-03 | 9.35E-03 | 9.35E-03 |
| **NDUFB9** | 3 | 2 | 15 | 15 | 3.72E-03 | 4.72E-03 | 1.40E-02 |
| **SLC2A8** | 4 | 3 | 15 | 15 | 3.72E-03 | 4.72E-03 | 1.40E-02 |
| **TXNDC2** | 2 | 1 | 15 | 15 | 9.35E-03 | 9.35E-03 | 9.35E-03 |
| **C9orf43** | 5 | 5 | 98 | 97 | 3.27E-02 | 1.52E-02 | 9.71E-03 |
| **CYP4F12** | 10 | 7 | 135 | 128 | 1.15E-02 | 1.66E-02 | 1.73E-02 |
| **HERC6** | 7 | 5 | 56 | 54 | 1.31E-02 | 1.71E-02 | 1.43E-02 |
| **HAS1** | 7 | 6 | 95 | 93 | 3.62E-02 | 1.93E-02 | 1.18E-02 |
| **OR4A5** | 6 | 4 | 53 | 53 | 2.39E-02 | 1.82E-02 | 1.10E-02 |
| **ELAC2** | 6 | 5 | 118 | 116 | 1.09E-02 | 1.51E-02 | 1.45E-02 |
| **AGTPBP1** | 5 | 4 | 29 | 29 | 4.92E-02 | 2.18E-02 | 1.21E-02 |
| **ASPH** | 5 | 3 | 29 | 29 | 2.58E-02 | 2.18E-02 | 1.21E-02 |
| **ADAMTSL1** | 19 | 17 | 207 | 205 | 4.02E-02 | 2.26E-02 | 1.29E-02 |
| **TSSC4** | 4 | 4 | 102 | 79 | 4.16E-02 | 4.05E-02 | 3.56E-02 |
| **HIPK4** | 5 | 4 | 44 | 43 | 1.65E-02 | 1.66E-02 | 1.34E-02 |
| **CALML4** | 4 | 3 | 34 | 34 | 1.62E-02 | 1.86E-02 | 1.29E-02 |
| **ADD1** | 2 | 2 | 18 | 18 | 7.60E-03 | 7.60E-03 | 1.37E-02 |
| **MTMR9** | 5 | 3 | 63 | 63 | 3.47E-03 | 5.20E-03 | 1.49E-02 |
| **BPIFB6** | 6 | 4 | 40 | 40 | 2.84E-02 | 2.01E-02 | 1.20E-02 |
| **CD2BP2** | 2 | 1 | 8 | 8 | 1.43E-02 | 1.43E-02 | 1.43E-02 |
| **CNOT6** | 5 | 4 | 8 | 8 | 1.28E-03 | 1.44E-03 | 2.38E-02 |
| **ACVR2A** | 3 | 2 | 8 | 8 | 1.82E-02 | 1.82E-02 | 1.43E-02 |
| **KRT6A** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **HIST1H4D** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **SCYL1** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **FBXO38** | 3 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **KCNJ15** | 3 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **MED13** | 4 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **CERS5** | 3 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **CDC42EP3** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **DPPA2** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **GSK3A** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **PTTG1IP** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **RAB26** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **TRAK1** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **ZAP70** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **WNT6** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **MASP2** | 5 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **NIPA2** | 3 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **AGTRAP** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **DNAJC14** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **ENO1** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **HTRA2** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **PRUNE** | 2 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **ALDH2** | 2 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **RHBDL2** | 3 | 1 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **FAM69B** | 5 | 3 | 85 | 85 | 2.81E-02 | 1.82E-02 | 1.28E-02 |
| **MXI1** | 3 | 2 | 2 | 2 | 3.00E-02 | 3.00E-02 | 3.00E-02 |
| **ACSF2** | 4 | 4 | 13 | 13 | 2.31E-02 | 2.43E-02 | 1.06E-02 |
| **AHDC1** | 4 | 3 | 13 | 13 | 1.26E-02 | 1.71E-02 | 1.39E-02 |
| **ALB** | 4 | 3 | 13 | 13 | 2.47E-03 | 2.69E-03 | 2.10E-02 |
| **AURKB** | 4 | 3 | 13 | 13 | 1.58E-02 | 2.17E-02 | 1.43E-02 |
| **CCBL1** | 4 | 4 | 127 | 126 | 4.30E-02 | 2.04E-02 | 1.23E-02 |
| **PAAF1** | 2 | 1 | 48 | 48 | 1.48E-02 | 1.48E-02 | 1.48E-02 |
| **TXLNB** | 7 | 6 | 131 | 129 | 1.51E-02 | 2.13E-02 | 1.96E-02 |
| **C11orf65** | 2 | 1 | 61 | 60 | 1.79E-02 | 1.79E-02 | 1.79E-02 |
| **AKIP1** | 2 | 2 | 39 | 38 | 3.63E-02 | 3.12E-02 | 2.02E-02 |
| **NOXRED1** | 2 | 2 | 6 | 6 | 2.47E-02 | 2.47E-02 | 1.44E-02 |
| **RNASE9** | 2 | 2 | 6 | 6 | 2.47E-02 | 2.47E-02 | 1.44E-02 |
| **CTHRC1** | 3 | 2 | 6 | 6 | 2.47E-02 | 2.47E-02 | 1.44E-02 |
| **PI15** | 3 | 2 | 6 | 6 | 2.47E-02 | 2.47E-02 | 1.44E-02 |
| **CCDC67** | 4 | 2 | 6 | 6 | 9.31E-03 | 9.31E-03 | 2.98E-02 |
| **CPB1** | 5 | 4 | 6 | 6 | 2.59E-02 | 3.20E-02 | 1.95E-02 |
| **GGN** | 3 | 2 | 6 | 6 | 9.31E-03 | 9.31E-03 | 2.98E-02 |
| **CAPRIN1** | 2 | 2 | 30 | 30 | 4.73E-02 | 2.07E-02 | 1.22E-02 |
| **CEP85L** | 7 | 7 | 39 | 39 | 2.45E-02 | 2.98E-02 | 1.74E-02 |
| **CSRNP2** | 4 | 3 | 6 | 6 | 1.44E-02 | 1.44E-02 | 2.47E-02 |
| **LPIN1** | 8 | 4 | 39 | 39 | 1.83E-02 | 2.31E-02 | 2.05E-02 |
| **CLEC4F** | 7 | 4 | 36 | 35 | 1.82E-02 | 2.22E-02 | 1.95E-02 |
| **TMEM145** | 2 | 2 | 38 | 38 | 2.26E-02 | 2.12E-02 | 1.69E-02 |
| **TIFAB** | 5 | 5 | 58 | 58 | 1.20E-02 | 1.59E-02 | 1.92E-02 |
| **BCO1** | 7 | 4 | 16 | 16 | 3.36E-03 | 7.85E-03 | 1.82E-02 |
| **RSPH1** | 8 | 4 | 91 | 90 | 4.27E-02 | 2.74E-02 | 1.80E-02 |
| **EMP3** | 2 | 1 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **CHRNA6** | 2 | 2 | 4 | 4 | 9.13E-03 | 9.13E-03 | 4.24E-02 |
| **ZBTB43** | 4 | 1 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **KDM8** | 2 | 2 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **MBNL1** | 2 | 2 | 4 | 4 | 3.13E-02 | 3.13E-02 | 2.02E-02 |
| **NUMB** | 2 | 2 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **SSTR2** | 2 | 2 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **PCOLCE** | 3 | 2 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **HACL1** | 4 | 2 | 4 | 4 | 3.13E-02 | 3.13E-02 | 2.02E-02 |
| **TBC1D16** | 3 | 2 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **ABHD13** | 2 | 2 | 4 | 4 | 3.13E-02 | 3.13E-02 | 2.02E-02 |
| **DMRTB1** | 2 | 1 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **ATG16L2** | 2 | 2 | 4 | 4 | 3.13E-02 | 3.13E-02 | 2.02E-02 |
| **ITPA** | 2 | 1 | 4 | 4 | 2.58E-02 | 2.58E-02 | 2.58E-02 |
| **MAST1** | 5 | 5 | 88 | 88 | 2.91E-03 | 5.52E-03 | 1.89E-02 |
| **RLF** | 13 | 10 | 129 | 127 | 4.93E-02 | 3.26E-02 | 1.90E-02 |
| **MYBPC1** | 6 | 6 | 49 | 49 | 2.84E-02 | 3.01E-02 | 2.02E-02 |
| **PNKD** | 2 | 2 | 19 | 17 | 4.45E-02 | 4.45E-02 | 2.76E-02 |
| **PALM2** | 3 | 3 | 71 | 71 | 1.19E-02 | 1.30E-02 | 2.20E-02 |
| **FBXO40** | 4 | 3 | 19 | 19 | 1.46E-02 | 2.00E-02 | 2.52E-02 |
| **AK1** | 2 | 2 | 19 | 19 | 4.33E-02 | 2.45E-02 | 1.50E-02 |
| **OR1Q1** | 6 | 4 | 43 | 43 | 3.36E-02 | 2.29E-02 | 1.97E-02 |
| **CROT** | 6 | 3 | 46 | 46 | 1.88E-02 | 2.48E-02 | 1.98E-02 |
| **OR10G3** | 8 | 7 | 43 | 43 | 3.34E-02 | 3.41E-02 | 2.21E-02 |
| **MAP2K2** | 2 | 1 | 65 | 65 | 2.16E-02 | 2.16E-02 | 2.16E-02 |
| **CEACAM5** | 5 | 3 | 22 | 22 | 2.13E-02 | 2.47E-02 | 1.80E-02 |
| **IQCG** | 4 | 4 | 22 | 22 | 1.95E-02 | 1.78E-02 | 2.29E-02 |
| **CAPN13** | 6 | 5 | 59 | 58 | 2.19E-02 | 3.05E-02 | 2.65E-02 |
| **RHOD** | 2 | 2 | 16 | 16 | 2.43E-02 | 2.94E-02 | 2.94E-02 |
| **PRTN3** | 2 | 2 | 16 | 16 | 4.81E-02 | 2.94E-02 | 2.94E-02 |
| **CD101** | 16 | 12 | 123 | 123 | 3.29E-02 | 3.00E-02 | 2.05E-02 |
| **NRSN1** | 2 | 2 | 37 | 36 | 3.62E-02 | 3.29E-02 | 2.52E-02 |
| **GDPD4** | 2 | 2 | 25 | 25 | 8.69E-03 | 1.37E-02 | 3.25E-02 |
| **MAP6D1** | 2 | 2 | 25 | 25 | 2.17E-02 | 2.91E-02 | 2.79E-02 |
| **ACAP3** | 2 | 2 | 79 | 78 | 3.09E-02 | 3.44E-02 | 2.62E-02 |
| **CEP76** | 2 | 2 | 28 | 28 | 3.40E-03 | 4.10E-03 | 2.80E-02 |
| **EPC2** | 2 | 1 | 28 | 28 | 2.08E-02 | 2.08E-02 | 2.08E-02 |
| **C11orf42** | 4 | 4 | 28 | 28 | 8.16E-03 | 9.38E-03 | 2.78E-02 |
| **ZBTB48** | 4 | 4 | 23 | 22 | 4.84E-02 | 4.50E-02 | 2.96E-02 |
| **CCNL2** | 7 | 5 | 66 | 65 | 1.44E-02 | 1.77E-02 | 3.06E-02 |
| **ZNF304** | 4 | 4 | 80 | 79 | 1.90E-02 | 2.96E-02 | 3.06E-02 |
| **OR4D6** | 6 | 4 | 53 | 53 | 2.27E-02 | 3.18E-02 | 2.75E-02 |
| **AIMP1** | 2 | 2 | 14 | 14 | 1.53E-02 | 1.53E-02 | 2.79E-02 |
| **KRT3** | 3 | 3 | 14 | 14 | 4.70E-02 | 4.31E-02 | 1.99E-02 |
| **WDR38** | 3 | 3 | 14 | 14 | 1.26E-03 | 2.59E-03 | 3.41E-02 |
| **CD68** | 3 | 3 | 14 | 14 | 3.08E-02 | 2.80E-02 | 1.53E-02 |
| **RNF145** | 3 | 3 | 14 | 14 | 1.78E-02 | 2.02E-02 | 3.11E-02 |
| **TXNIP** | 5 | 4 | 63 | 63 | 2.22E-03 | 4.15E-03 | 2.57E-02 |
| **TP53BP1** | 12 | 11 | 125 | 124 | 1.26E-02 | 2.12E-02 | 3.22E-02 |
| **SLFN14** | 4 | 3 | 73 | 72 | 3.64E-02 | 4.21E-02 | 2.92E-02 |
| **EIF4E1B** | 3 | 3 | 15 | 15 | 4.00E-02 | 3.20E-02 | 2.25E-02 |
| **CERS4** | 2 | 2 | 29 | 28 | 4.47E-02 | 4.23E-02 | 2.57E-02 |
| **FAM124A** | 3 | 2 | 29 | 29 | 3.89E-02 | 3.46E-02 | 2.15E-02 |
| **KLK3** | 7 | 7 | 47 | 47 | 2.96E-02 | 3.83E-02 | 2.86E-02 |
| **AURKAIP1** | 3 | 3 | 121 | 120 | 4.14E-02 | 4.56E-02 | 3.05E-02 |
| **CYTH3** | 3 | 3 | 60 | 60 | 4.20E-02 | 4.06E-02 | 2.87E-02 |
| **TDP1** | 5 | 2 | 60 | 60 | 2.20E-02 | 2.33E-02 | 2.89E-02 |
| **UROS** | 2 | 1 | 80 | 80 | 2.76E-02 | 2.76E-02 | 2.76E-02 |
| **ZXDC** | 6 | 2 | 44 | 44 | 2.84E-02 | 3.19E-02 | 2.33E-02 |
| **IGFL1** | 2 | 2 | 63 | 62 | 3.57E-02 | 3.23E-02 | 3.05E-02 |
| **C6orf25** | 3 | 2 | 52 | 52 | 3.38E-02 | 3.04E-02 | 2.86E-02 |
| **TRIM9** | 3 | 2 | 52 | 52 | 4.05E-02 | 4.34E-02 | 2.89E-02 |
| **CLEC4M** | 4 | 3 | 9 | 9 | 2.49E-02 | 3.49E-02 | 2.89E-02 |
| **NR1H3** | 2 | 2 | 9 | 9 | 3.83E-02 | 2.74E-02 | 1.61E-02 |
| **PERP** | 2 | 1 | 9 | 9 | 2.69E-02 | 2.69E-02 | 2.69E-02 |
| **CTNNA1** | 3 | 3 | 9 | 9 | 2.75E-02 | 2.75E-02 | 3.69E-02 |
| **ITGB3** | 7 | 3 | 111 | 111 | 4.69E-02 | 4.57E-02 | 2.90E-02 |
| **PPP6R1** | 7 | 5 | 41 | 41 | 4.65E-03 | 8.11E-03 | 3.37E-02 |
| **FAM84A** | 2 | 1 | 17 | 17 | 3.15E-02 | 3.15E-02 | 3.15E-02 |
| **TRIM55** | 7 | 5 | 114 | 113 | 4.45E-02 | 4.90E-02 | 3.26E-02 |
| **PCDHB1** | 6 | 5 | 9 | 9 | 1.08E-02 | 1.41E-02 | 3.38E-02 |
| **ATG7** | 8 | 8 | 41 | 41 | 4.15E-02 | 4.73E-02 | 3.17E-02 |
| **ACSS2** | 7 | 7 | 46 | 46 | 2.65E-02 | 3.67E-02 | 3.33E-02 |
| **KCTD17** | 2 | 2 | 46 | 46 | 3.62E-02 | 3.24E-02 | 3.04E-02 |
| **GABBR1** | 3 | 2 | 38 | 38 | 2.77E-02 | 2.74E-02 | 3.27E-02 |
| **R3HDM2** | 4 | 4 | 20 | 20 | 7.78E-03 | 9.26E-03 | 3.88E-02 |
| **NAAA** | 3 | 2 | 20 | 19 | 3.01E-02 | 3.01E-02 | 4.05E-02 |
| **TNFRSF9** | 4 | 4 | 20 | 20 | 4.63E-02 | 3.76E-02 | 3.18E-02 |
| **RGL3** | 2 | 1 | 14 | 14 | 4.40E-02 | 4.40E-02 | 4.40E-02 |
| **ZSCAN22** | 2 | 1 | 32 | 32 | 3.01E-02 | 3.01E-02 | 3.01E-02 |
| **KRT36** | 7 | 6 | 51 | 51 | 5.83E-03 | 1.01E-02 | 3.86E-02 |
| **SLC27A5** | 4 | 3 | 23 | 23 | 1.71E-02 | 1.83E-02 | 4.51E-02 |
| **SMAP1** | 2 | 2 | 23 | 23 | 4.68E-02 | 4.39E-02 | 3.53E-02 |
| **KLRC3** | 2 | 1 | 23 | 23 | 3.70E-02 | 3.70E-02 | 3.70E-02 |
| **YIPF1** | 4 | 4 | 29 | 29 | 3.03E-02 | 4.60E-02 | 3.15E-02 |
| **CPEB3** | 3 | 3 | 26 | 26 | 4.72E-02 | 4.68E-02 | 3.73E-02 |
| **USP16** | 8 | 6 | 126 | 124 | 1.55E-02 | 2.65E-02 | 4.95E-02 |
| **CPED1** | 6 | 6 | 58 | 58 | 3.00E-02 | 3.98E-02 | 3.20E-02 |
| **PLEK2** | 4 | 3 | 12 | 12 | 2.32E-02 | 2.66E-02 | 4.50E-02 |
| **NCL** | 2 | 2 | 12 | 12 | 3.74E-02 | 3.74E-02 | 3.10E-02 |
| **HAUS1** | 2 | 2 | 75 | 75 | 2.12E-02 | 2.38E-02 | 4.49E-02 |
| **MSTN** | 2 | 1 | 12 | 12 | 3.10E-02 | 3.10E-02 | 3.10E-02 |
| **CAPS2** | 3 | 1 | 39 | 39 | 4.87E-02 | 4.87E-02 | 4.87E-02 |
| **ALPI** | 3 | 2 | 72 | 72 | 2.59E-02 | 3.16E-02 | 4.77E-02 |
| **OR2T8** | 3 | 2 | 60 | 60 | 4.92E-02 | 4.45E-02 | 4.20E-02 |
| **BHLHE40** | 2 | 1 | 7 | 7 | 3.88E-02 | 3.88E-02 | 3.88E-02 |
| **PLA2G2E** | 2 | 1 | 7 | 7 | 3.88E-02 | 3.88E-02 | 3.88E-02 |
| **C6orf226** | 3 | 1 | 7 | 7 | 3.88E-02 | 3.88E-02 | 3.88E-02 |
| **WBP2** | 2 | 1 | 7 | 7 | 3.88E-02 | 3.88E-02 | 3.88E-02 |
| **BRD3** | 5 | 3 | 7 | 7 | 2.89E-02 | 2.89E-02 | 4.57E-02 |
| **MRGPRX2** | 2 | 1 | 15 | 15 | 4.77E-02 | 4.77E-02 | 4.77E-02 |
| **RRM1** | 2 | 1 | 15 | 15 | 4.77E-02 | 4.77E-02 | 4.77E-02 |
| **RNF111** | 8 | 6 | 49 | 49 | 1.39E-02 | 2.49E-02 | 4.54E-02 |
| **RNPEPL1** | 2 | 1 | 32 | 32 | 5.00E-02 | 5.00E-02 | 5.00E-02 |
| **EPB41L4B** | 4 | 2 | 30 | 30 | 4.08E-02 | 4.07E-02 | 4.83E-02 |
| **HTR7** | 4 | 4 | 18 | 18 | 4.27E-02 | 4.39E-02 | 4.45E-02 |
| **TACR2** | 2 | 1 | 18 | 18 | 4.00E-02 | 4.00E-02 | 4.00E-02 |
| **GDF5** | 2 | 2 | 24 | 24 | 3.95E-02 | 3.95E-02 | 4.93E-02 |
| **ZNF385B** | 2 | 1 | 10 | 10 | 4.49E-02 | 4.49E-02 | 4.49E-02 |
| **NGLY1** | 3 | 3 | 5 | 5 | 2.28E-02 | 2.28E-02 | 3.96E-02 |
| **OR5W2** | 6 | 6 | 902 | 854 | 4.45E-02 | 1.66E-02 | 1.00E-02 |
| **ATP1B2** | 3 | 3 | 3522 | 2777 | 4.58E-02 | 2.06E-02 | 1.30E-02 |
| **SH3PXD2A** | 16 | 13 | 1407 | 1286 | 2.91E-02 | 3.53E-02 | 3.42E-02 |

N.Marker.All: number of SNPs in the gene; N.Marker.Test: number of SNPs used for the test; MAC: minor allele count; M: number of individuals with minor alleles.