

Table S2. SNPs associated with TSH

| SNP | chr | effect_allele | other_allele | P-value | beta (β) | se | EAf | R2 | F.statistic |
|-------------|-----|---------------|--------------|-----------|------------------|----------|--------|--------------|-------------|
| rs10116772 | 9 | A | C | 1.655E-11 | 0.000121407 | 0.0061 | 0.4588 | 0.029046447 | 46.37055193 |
| rs10125444 | 9 | A | G | 1.599E-09 | 2.50E-05 | 6.30E-03 | 0.5169 | -0.025811309 | 39.00230272 |
| rs10401485 | 19 | T | C | 1.158E-15 | -1.89E-06 | 6.30E-03 | 0.4089 | -0.034941932 | 50.07032894 |
| rs1045475 | 16 | A | G | 2.684E-09 | 8.36E-05 | 8.20E-03 | 0.364 | 0.025586382 | 40.70176521 |
| rs10799824 | 1 | A | G | 4.947E-39 | -3.12E-05 | 8.50E-03 | 0.1726 | -0.057875461 | 79.69090284 |
| rs10948107 | 6 | A | G | 1.047E-24 | -1.22E-05 | 7.10E-03 | 0.1886 | -0.044085741 | 65.45000539 |
| rs117300236 | 17 | A | G | 1.222E-09 | -3.56E-05 | 1.12E-02 | 0.1474 | 0.026857622 | 40.47806798 |
| rs11857151 | 15 | C | G | 9.825E-21 | -4.31E-05 | 6.50E-03 | 0.7166 | 0.040245799 | 64.99923425 |
| rs1203933 | 20 | T | C | 6.486E-12 | -5.93E-05 | 7.20E-03 | 0.2775 | -0.029494416 | 44.40823492 |
| rs12284404 | 11 | A | G | 2.477E-22 | 1.56E-05 | 6.90E-03 | 0.1722 | -0.041453324 | 61.69745619 |
| rs1265091 | 6 | T | C | 3.195E-11 | 8.12E-05 | 8.60E-03 | 0.1571 | 0.030402546 | 42.65738557 |
| rs1479560 | 5 | T | G | 2.039E-16 | -3.86E-05 | 8.80E-03 | 0.3516 | -0.035542288 | 52.01111715 |
| rs1479567 | 5 | A | G | 2.99E-117 | 4.59E-06 | 6.20E-03 | 0.6332 | 0.100033657 | 168.4375712 |
| rs214334 | 1 | A | G | 4.246E-16 | 3.69E-05 | 6.90E-03 | 0.7317 | -0.036229384 | 50.92767718 |
| rs2396083 | 6 | C | G | 1.187E-40 | -2.53E-05 | 6.90E-03 | 0.6369 | -0.057132714 | 93.92517151 |
| rs28559861 | 14 | T | G | 8.677E-14 | -4.87E-05 | 7.10E-03 | 0.6346 | 0.032203245 | 51.57784312 |
| rs2919373 | 8 | T | C | 1.655E-14 | 2.81E-05 | 7.60E-03 | 0.2244 | -0.032793289 | 49.21746881 |
| rs3008043 | 6 | A | T | 2.903E-48 | 6.82E-05 | 6.60E-03 | 0.2843 | -0.063335189 | 89.15355434 |
| rs30227 | 16 | T | C | 7.586E-14 | -2.16E-05 | 6.30E-03 | 0.6245 | -0.031866969 | 47.87014631 |
| rs3813580 | 16 | C | G | 4.641E-42 | 9.48E-05 | 6.50E-03 | 0.2807 | -0.058008744 | 84.98688482 |
| rs3885190 | 8 | T | C | 8.618E-09 | -1.47E-05 | 8.00E-03 | 0.1223 | -0.024617681 | 37.24200058 |
| rs4445669 | 11 | T | C | 5.758E-11 | 2.80E-05 | 6.10E-03 | 0.6213 | -0.027922056 | 42.10512022 |
| rs4793440 | 17 | A | G | 3.83E-14 | -1.95E-05 | 6.10E-03 | 0.7147 | -0.032348692 | 48.5711093 |
| rs4933466 | 10 | A | G | 5.134E-10 | 7.97E-05 | 6.30E-03 | 0.5513 | 0.026900195 | 42.84950007 |
| rs59381142 | 3 | A | G | 1.696E-14 | 4.46E-05 | 7.60E-03 | 0.2184 | -0.033433194 | 48.0762923 |
| rs6724363 | 2 | T | G | 1.907E-31 | 1.69E-05 | 6.90E-03 | 0.6026 | 0.051389242 | 80.50286243 |
| rs7156872 | 14 | C | G | 2.78E-18 | -4.92E-05 | 7.60E-03 | 0.2125 | 0.037640938 | 60.62768814 |
| rs73398264 | 15 | T | C | 4.429E-33 | 8.05E-06 | 6.90E-03 | 0.8283 | 0.051187567 | 83.62417245 |
| rs75125154 | 1 | A | G | 5.411E-20 | 6.00E-05 | 1.14E-02 | 0.8576 | -0.040550935 | 56.76574625 |
| rs7695810 | 4 | C | G | 2.522E-51 | 5.33E-05 | 7.60E-03 | 0.8104 | 0.066067653 | 105.1236964 |
| rs7845302 | 8 | A | C | 1.951E-09 | 2.76E-05 | 6.60E-03 | 0.5911 | -0.02574325 | 38.90204356 |
| rs79085669 | 10 | A | G | 9.134E-10 | 3.90E-07 | 6.60E-03 | 0.1937 | -0.026327923 | 39.76291004 |
| rs930542 | 3 | A | G | 9.259E-11 | -3.30E-05 | 7.00E-03 | 0.3059 | 0.027703188 | 44.1650375 |
| rs9511147 | 13 | C | G | 1.813E-11 | -2.07E-06 | 6.50E-03 | 0.7857 | 0.029041041 | 46.36166439 |
| rs9915657 | 17 | T | C | 1.906E-18 | 5.54E-05 | 6.10E-03 | 0.4405 | -0.037475572 | 55.99098423 |