**Supplemental Table 1 Definition of depression phenotypes**

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| --- |
| **Broad depression**  (1) Broad depression was defined using self-reported help-seeking behaviour for mental health difficulties.  (2) Cases were determined by the touchscreen response to either of two questions: “Have you ever seen a general practitioner for nerves, anxiety, tension or depression?” or “Have you ever seen a psychiatrist for nerves, anxiety, tension or depression?”. |
| **Major depressive disorder**  (1) Major depressive disorder was derived from touchscreen responses to questions about the presence and duration of low mood and anhedonia.  (2) Cases were determined if the participants had indicated that they were “depressed/down for a whole week; plus at least 2 weeks duration; plus ever seen a general practitioner or psychiatrist for nerves, anxiety or depression”, or “ever anhedonia for a whole week; plus at least 2 weeks duration; plus ever seen a general practitioner or psychiatrist for nerves, anxiety, or depression”. |
| **ICD-coded major depressive disorder phenotype**  (1) ICD-coded major depressive disorder phenotype was derived from linked hospital admission records.  (2) Participants were classified as cases if they had either an ICD-9/10 primary or secondary diagnosis for a depressive unipolar mood disorder (ICD codes: F32—Single Episode Depression, F33—Recurrent Depression, F34—Persistent mood disorders, F38—Other mood disorders and F39—Unspecified mood disorders). |

**Supplemental Table 2 Instrumental variables for predicting total cholesterol**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **SNP** | **A1** | **A2** | **EAF** | **Beta** | **SE** | **P value** | **Sample**  **size** | **F statistic** |
| 1 | rs616402 | T | C | 0.309 | -0.010 | 0.0017 | 8.71E-10 | 924306 | 16.055 |
| 2 | rs4661359 | C | T | 0.372 | -0.012 | 0.0016 | 3.72E-13 | 921987 | 24.664 |
| 3 | rs1767147 | A | G | 0.135 | -0.027 | 0.0023 | 4.18E-32 | 921682 | 32.489 |
| 4 | rs35148262 | A | G | 0.461 | -0.025 | 0.0016 | 4.17E-56 | 918165 | 123.787 |
| 5 | rs1574366 | C | G | 0.313 | -0.010 | 0.0017 | 8.48E-09 | 930573 | 14.261 |
| 6 | rs4329504 | G | A | 0.419 | -0.010 | 0.0016 | 1.41E-10 | 917433 | 20.034 |
| 7 | rs1863668 | T | G | 0.422 | -0.011 | 0.0016 | 2.05E-11 | 920727 | 21.914 |
| 8 | rs12117661 | G | C | 0.240 | -0.060 | 0.0019 | 1.00E-200 | 927067 | 382.799 |
| 9 | rs2479415 | C | T | 0.463 | 0.031 | 0.0017 | 6.39E-77 | 859764 | 171.384 |
| 10 | rs624698 | G | A | 0.397 | -0.061 | 0.0020 | 1.00E-200 | 726153 | 459.551 |
| 11 | rs6422512 | C | T | 0.207 | -0.025 | 0.0020 | 1.43E-38 | 920566 | 55.383 |
| 12 | rs4970829 | A | G | 0.071 | -0.094 | 0.0030 | 1.00E-200 | 930573 | 125.842 |
| 13 | rs6670347 | C | T | 0.040 | -0.094 | 0.0040 | 9.22E-123 | 925524 | 42.234 |
| 14 | rs267733 | G | A | 0.153 | -0.014 | 0.0022 | 2.84E-11 | 929645 | 11.478 |
| 15 | rs4390169 | A | G | 0.487 | 0.011 | 0.0016 | 5.58E-12 | 929803 | 23.720 |
| 16 | rs2296288 | T | C | 0.442 | -0.012 | 0.0016 | 9.02E-15 | 929777 | 29.646 |
| 17 | rs2486934 | G | T | 0.453 | -0.010 | 0.0016 | 1.21E-09 | 927816 | 18.316 |
| 18 | rs4500383 | T | C | 0.402 | 0.009 | 0.0016 | 3.87E-09 | 930623 | 16.679 |
| 19 | rs2642438 | A | G | 0.293 | -0.026 | 0.0017 | 4.64E-50 | 917365 | 91.707 |
| 20 | rs10910476 | C | T | 0.460 | -0.011 | 0.0016 | 8.80E-13 | 917285 | 25.385 |
| 21 | rs2587534 | G | A | 0.467 | -0.042 | 0.0016 | 2.67E-152 | 917228 | 344.136 |
| 22 | rs10910522 | A | G | 0.434 | -0.012 | 0.0016 | 4.55E-14 | 897240 | 27.963 |
| 23 | rs3738622 | T | G | 0.203 | -0.019 | 0.0020 | 1.24E-20 | 885670 | 28.066 |
| 24 | rs3820897 | T | C | 0.198 | 0.016 | 0.0020 | 6.68E-17 | 912778 | 22.157 |
| 25 | rs3856440 | G | A | 0.499 | -0.009 | 0.0016 | 1.34E-08 | 912439 | 16.134 |
| 26 | rs4075673 | T | C | 0.443 | 0.053 | 0.0016 | 1.00E-200 | 930314 | 561.087 |
| 27 | rs1712249 | T | C | 0.249 | -0.063 | 0.0018 | 1.00E-200 | 927996 | 448.313 |
| 28 | rs13031661 | C | T | 0.388 | 0.023 | 0.0031 | 2.58E-13 | 468650 | 25.411 |
| 29 | rs4665972 | T | C | 0.394 | 0.058 | 0.0017 | 1.00E-200 | 918154 | 581.596 |
| 30 | rs10495907 | A | G | 0.140 | 0.028 | 0.0023 | 3.12E-35 | 930636 | 36.943 |
| 31 | rs56266464 | A | G | 0.062 | -0.099 | 0.0033 | 1.00E-200 | 930039 | 106.164 |
| 32 | rs35206901 | G | A | 0.187 | -0.034 | 0.0020 | 9.68E-64 | 930034 | 86.387 |
| 33 | rs360804 | A | G | 0.316 | -0.018 | 0.0017 | 2.79E-27 | 929767 | 50.604 |
| 34 | rs954680 | C | G | 0.297 | -0.016 | 0.0017 | 3.66E-19 | 919910 | 33.427 |
| 35 | rs6547629 | T | A | 0.340 | -0.010 | 0.0017 | 2.65E-09 | 923662 | 15.900 |
| 36 | rs2970902 | C | G | 0.343 | 0.011 | 0.0017 | 1.67E-11 | 930611 | 20.428 |
| 37 | rs10171847 | G | C | 0.358 | -0.012 | 0.0016 | 3.41E-13 | 930621 | 24.343 |
| 38 | rs6723720 | C | T | 0.169 | 0.018 | 0.0021 | 3.91E-17 | 930614 | 19.892 |
| 39 | rs6734238 | G | A | 0.409 | -0.014 | 0.0016 | 2.93E-19 | 930634 | 38.912 |
| 40 | rs55809639 | A | T | 0.092 | -0.037 | 0.0027 | 7.62E-43 | 930554 | 31.577 |
| 41 | rs17050272 | A | G | 0.424 | -0.018 | 0.0016 | 4.18E-28 | 888448 | 59.020 |
| 42 | rs10187402 | G | C | 0.249 | 0.023 | 0.0021 | 1.18E-27 | 814141 | 44.417 |
| 43 | rs4233566 | A | G | 0.448 | -0.010 | 0.0016 | 1.08E-10 | 929834 | 20.609 |
| 44 | rs6437108 | T | C | 0.394 | -0.015 | 0.0016 | 1.46E-19 | 921853 | 39.096 |
| 45 | rs10184673 | G | A | 0.408 | 0.022 | 0.0016 | 3.53E-44 | 930543 | 93.906 |
| 46 | rs1155061 | G | A | 0.383 | -0.010 | 0.0016 | 9.49E-10 | 927913 | 17.689 |
| 47 | rs113867238 | A | G | 0.304 | -0.025 | 0.0017 | 4.91E-50 | 929612 | 93.621 |
| 48 | rs62183915 | A | G | 0.437 | -0.012 | 0.0016 | 3.32E-13 | 927123 | 26.084 |
| 49 | rs3845811 | G | C | 0.429 | -0.010 | 0.0016 | 5.72E-10 | 927088 | 18.821 |
| 50 | rs1250259 | T | A | 0.265 | -0.017 | 0.0018 | 1.81E-20 | 929802 | 33.498 |
| 51 | rs887829 | T | C | 0.327 | -0.018 | 0.0017 | 2.36E-27 | 929193 | 51.671 |
| 52 | rs1584063 | A | G | 0.453 | -0.026 | 0.0016 | 1.28E-57 | 891241 | 126.888 |
| 53 | rs709166 | A | G | 0.471 | -0.011 | 0.0016 | 5.88E-12 | 920830 | 23.606 |
| 54 | rs6792725 | A | G | 0.325 | 0.019 | 0.0018 | 2.93E-28 | 905707 | 53.324 |
| 55 | rs9837622 | A | T | 0.073 | -0.034 | 0.0031 | 3.41E-28 | 930627 | 16.324 |
| 56 | rs9844432 | G | C | 0.080 | -0.036 | 0.0028 | 2.18E-37 | 930634 | 24.062 |
| 57 | rs55921103 | G | T | 0.363 | -0.013 | 0.0017 | 2.13E-15 | 918144 | 29.107 |
| 58 | rs189174 | C | G | 0.351 | 0.018 | 0.0017 | 1.03E-25 | 920648 | 50.073 |
| 59 | rs11712614 | A | C | 0.301 | -0.010 | 0.0017 | 1.82E-08 | 920823 | 13.332 |
| 60 | rs12634663 | C | G | 0.450 | -0.010 | 0.0016 | 6.13E-10 | 913273 | 18.948 |
| 61 | rs11719535 | C | T | 0.242 | -0.014 | 0.0019 | 1.36E-13 | 920810 | 20.089 |
| 62 | rs78946096 | G | A | 0.047 | -0.045 | 0.0037 | 3.15E-34 | 914905 | 13.277 |
| 63 | rs6770560 | G | A | 0.328 | -0.015 | 0.0017 | 5.06E-19 | 930619 | 35.006 |
| 64 | rs4679881 | T | C | 0.460 | 0.016 | 0.0016 | 1.28E-24 | 919132 | 52.124 |
| 65 | rs10513801 | G | T | 0.131 | -0.019 | 0.0023 | 1.03E-16 | 929801 | 15.692 |
| 66 | rs13108218 | A | G | 0.389 | 0.025 | 0.0017 | 2.76E-52 | 911855 | 110.074 |
| 67 | rs4234798 | T | G | 0.394 | -0.010 | 0.0016 | 4.41E-10 | 924876 | 18.586 |
| 68 | rs2071027 | C | T | 0.346 | 0.009 | 0.0016 | 3.77E-08 | 930559 | 13.696 |
| 69 | rs34707604 | C | T | 0.239 | 0.039 | 0.0022 | 2.62E-69 | 816909 | 112.648 |
| 70 | rs9994887 | G | A | 0.471 | 0.020 | 0.0018 | 7.89E-30 | 818247 | 64.138 |
| 71 | rs4859403 | T | C | 0.121 | -0.017 | 0.0024 | 7.36E-13 | 926321 | 10.943 |
| 72 | rs3775228 | T | C | 0.392 | 0.014 | 0.0016 | 6.41E-17 | 920827 | 33.295 |
| 73 | rs1583977 | A | T | 0.132 | 0.016 | 0.0024 | 1.45E-11 | 930631 | 10.450 |
| 74 | rs13107325 | T | C | 0.060 | -0.035 | 0.0032 | 7.06E-28 | 930635 | 13.427 |
| 75 | rs62335637 | G | A | 0.372 | -0.010 | 0.0016 | 8.88E-10 | 929786 | 17.548 |
| 76 | rs923308 | G | A | 0.284 | 0.010 | 0.0018 | 4.74E-08 | 920617 | 12.128 |
| 77 | rs2085723 | G | T | 0.342 | -0.010 | 0.0016 | 9.05E-10 | 930625 | 16.887 |
| 78 | rs72729610 | G | A | 0.166 | -0.018 | 0.0021 | 2.45E-18 | 930627 | 21.124 |
| 79 | rs793899 | C | T | 0.408 | 0.013 | 0.0016 | 3.32E-15 | 927029 | 29.984 |
| 80 | rs10035977 | A | T | 0.284 | -0.011 | 0.0018 | 1.43E-09 | 900204 | 14.898 |
| 81 | rs2910953 | A | T | 0.246 | 0.012 | 0.0018 | 1.10E-10 | 930635 | 15.448 |
| 82 | rs3010277 | G | A | 0.210 | -0.016 | 0.0019 | 1.06E-17 | 930596 | 24.353 |
| 83 | rs2112653 | C | T | 0.439 | 0.059 | 0.0016 | 1.00E-200 | 917997 | 642.446 |
| 84 | rs6869845 | C | T | 0.451 | -0.014 | 0.0016 | 2.00E-19 | 929581 | 40.233 |
| 85 | rs6894249 | G | A | 0.390 | 0.014 | 0.0016 | 1.80E-17 | 927063 | 34.425 |
| 86 | rs13179861 | A | G | 0.180 | -0.013 | 0.0020 | 1.05E-10 | 930581 | 12.319 |
| 87 | rs12657266 | C | T | 0.365 | -0.042 | 0.0016 | 5.30E-149 | 927140 | 313.402 |
| 88 | rs13357800 | C | T | 0.426 | -0.012 | 0.0016 | 5.95E-14 | 919882 | 27.577 |
| 89 | rs9470261 | A | T | 0.285 | 0.012 | 0.0022 | 9.64E-09 | 717845 | 13.414 |
| 90 | rs7746081 | A | G | 0.330 | -0.027 | 0.0017 | 2.48E-58 | 929767 | 114.660 |
| 91 | rs6456349 | G | A | 0.340 | -0.011 | 0.0017 | 4.96E-12 | 917280 | 21.409 |
| 92 | rs80215559 | C | T | 0.062 | -0.050 | 0.0033 | 1.24E-52 | 923840 | 27.076 |
| 93 | rs3129977 | C | A | 0.119 | -0.025 | 0.0027 | 6.06E-20 | 800286 | 17.529 |
| 94 | rs12662617 | A | C | 0.171 | 0.015 | 0.0022 | 1.76E-11 | 856552 | 12.820 |
| 95 | rs6689 | G | A | 0.210 | 0.048 | 0.0022 | 8.60E-106 | 908775 | 158.369 |
| 96 | rs11754773 | G | A | 0.097 | -0.039 | 0.0026 | 2.28E-49 | 929766 | 38.113 |
| 97 | rs4714035 | G | A | 0.498 | 0.015 | 0.0016 | 3.08E-22 | 920065 | 47.026 |
| 98 | rs17665178 | G | C | 0.303 | -0.015 | 0.0018 | 7.85E-18 | 915902 | 31.253 |
| 99 | rs6458949 | T | G | 0.260 | 0.013 | 0.0018 | 7.15E-14 | 930635 | 21.559 |
| 100 | rs9496567 | A | G | 0.233 | -0.020 | 0.0019 | 1.71E-26 | 930620 | 40.557 |
| 101 | rs35814089 | C | T | 0.471 | 0.012 | 0.0016 | 9.60E-15 | 930614 | 29.888 |
| 102 | rs4946713 | A | C | 0.444 | -0.011 | 0.0016 | 2.56E-11 | 928007 | 21.964 |
| 103 | rs1338667 | A | T | 0.400 | -0.020 | 0.0016 | 2.86E-37 | 930625 | 78.119 |
| 104 | rs72971192 | C | T | 0.236 | -0.015 | 0.0019 | 1.85E-14 | 901056 | 21.165 |
| 105 | rs7758845 | C | A | 0.279 | -0.027 | 0.0017 | 2.29E-55 | 930633 | 98.846 |
| 106 | rs12208357 | T | C | 0.069 | 0.057 | 0.0030 | 2.30E-79 | 930630 | 45.716 |
| 107 | rs117733303 | G | A | 0.017 | 0.118 | 0.0061 | 1.23E-84 | 924652 | 12.775 |
| 108 | rs118039278 | A | G | 0.064 | 0.101 | 0.0032 | 1.00E-200 | 928060 | 116.194 |
| 109 | rs10263252 | A | G | 0.208 | -0.022 | 0.0019 | 2.88E-30 | 923599 | 43.065 |
| 110 | rs79949326 | T | C | 0.250 | 0.015 | 0.0018 | 2.15E-17 | 930589 | 27.002 |
| 111 | rs10242866 | T | C | 0.392 | -0.010 | 0.0016 | 2.19E-10 | 930619 | 19.206 |
| 112 | rs55649657 | G | C | 0.206 | 0.038 | 0.0019 | 2.37E-88 | 929771 | 129.916 |
| 113 | rs896311 | G | A | 0.303 | -0.014 | 0.0017 | 1.62E-15 | 919953 | 26.815 |
| 114 | rs61003864 | C | T | 0.198 | 0.013 | 0.0020 | 6.49E-11 | 929633 | 13.551 |
| 115 | rs197359 | A | G | 0.174 | -0.014 | 0.0021 | 1.73E-11 | 929749 | 13.009 |
| 116 | rs1122291 | T | C | 0.245 | 0.013 | 0.0018 | 1.24E-11 | 924310 | 16.981 |
| 117 | rs17725246 | C | T | 0.200 | 0.041 | 0.0020 | 5.94E-91 | 897928 | 130.911 |
| 118 | rs8565 | T | C | 0.272 | 0.011 | 0.0018 | 6.31E-10 | 927956 | 15.137 |
| 119 | rs1229498 | T | G | 0.285 | 0.012 | 0.0018 | 1.26E-11 | 917613 | 18.695 |
| 120 | rs1014283 | A | C | 0.185 | -0.014 | 0.0020 | 1.70E-11 | 930615 | 13.656 |
| 121 | rs6950023 | T | G | 0.182 | -0.017 | 0.0021 | 1.15E-15 | 918167 | 19.105 |
| 122 | rs1734911 | C | G | 0.113 | 0.024 | 0.0025 | 1.04E-22 | 930624 | 19.283 |
| 123 | rs1124175 | T | G | 0.148 | 0.017 | 0.0023 | 2.37E-13 | 919353 | 13.536 |
| 124 | rs6952171 | C | A | 0.410 | -0.010 | 0.0017 | 6.97E-10 | 873607 | 18.398 |
| 125 | rs11761517 | T | C | 0.458 | -0.011 | 0.0016 | 8.42E-11 | 885432 | 20.931 |
| 126 | rs2928576 | T | C | 0.328 | -0.011 | 0.0017 | 6.80E-12 | 930625 | 20.756 |
| 127 | rs7010207 | T | C | 0.257 | 0.012 | 0.0018 | 4.16E-11 | 929997 | 16.627 |
| 128 | rs9987289 | A | G | 0.091 | -0.076 | 0.0027 | 4.38E-175 | 930635 | 131.677 |
| 129 | rs13255048 | A | G | 0.141 | 0.031 | 0.0022 | 1.56E-44 | 930609 | 47.481 |
| 130 | rs900776 | C | A | 0.167 | -0.018 | 0.0021 | 6.14E-18 | 924876 | 20.721 |
| 131 | rs28615248 | C | T | 0.194 | 0.025 | 0.0020 | 4.89E-37 | 929753 | 50.561 |
| 132 | rs9297994 | G | A | 0.338 | 0.037 | 0.0017 | 1.06E-110 | 929690 | 223.714 |
| 133 | rs7839474 | G | A | 0.376 | 0.013 | 0.0016 | 2.17E-16 | 928000 | 31.649 |
| 134 | rs4385461 | T | G | 0.315 | -0.014 | 0.0017 | 5.54E-16 | 930632 | 28.309 |
| 135 | rs2737246 | C | G | 0.274 | -0.027 | 0.0017 | 7.40E-54 | 930579 | 94.992 |
| 136 | rs6999569 | G | A | 0.470 | -0.062 | 0.0016 | 1.00E-200 | 912409 | 761.834 |
| 137 | rs11787335 | T | C | 0.352 | 0.021 | 0.0017 | 6.69E-37 | 921029 | 73.473 |
| 138 | rs3780181 | G | A | 0.071 | -0.031 | 0.0031 | 3.80E-23 | 929967 | 12.970 |
| 139 | rs686030 | C | A | 0.142 | -0.023 | 0.0022 | 1.96E-25 | 930520 | 26.471 |
| 140 | rs28498684 | A | G | 0.409 | 0.012 | 0.0016 | 4.07E-14 | 918194 | 27.621 |
| 141 | rs13300056 | T | C | 0.079 | 0.035 | 0.0031 | 1.74E-29 | 930596 | 18.521 |
| 142 | rs77316559 | G | C | 0.203 | -0.011 | 0.0020 | 1.44E-08 | 926589 | 10.398 |
| 143 | rs7864568 | A | G | 0.320 | -0.013 | 0.0018 | 2.63E-13 | 890637 | 23.271 |
| 144 | rs7046887 | T | C | 0.463 | 0.013 | 0.0016 | 5.20E-17 | 930602 | 34.938 |
| 145 | rs2066714 | C | T | 0.122 | 0.034 | 0.0024 | 9.21E-48 | 924364 | 45.161 |
| 146 | rs11789603 | T | C | 0.098 | 0.041 | 0.0026 | 5.73E-55 | 929993 | 42.993 |
| 147 | rs2740488 | C | A | 0.260 | -0.051 | 0.0018 | 2.64E-182 | 929992 | 319.118 |
| 148 | rs10818578 | G | A | 0.263 | 0.011 | 0.0018 | 9.81E-10 | 929698 | 14.484 |
| 149 | rs6478851 | A | G | 0.235 | -0.014 | 0.0018 | 6.97E-14 | 927131 | 20.163 |
| 150 | rs2519093 | T | C | 0.187 | 0.070 | 0.0020 | 1.00E-200 | 929786 | 379.770 |
| 151 | rs6601924 | T | C | 0.157 | -0.017 | 0.0022 | 1.67E-14 | 927159 | 15.587 |
| 152 | rs7903402 | T | C | 0.416 | 0.021 | 0.0016 | 3.38E-40 | 896677 | 85.591 |
| 153 | rs2291428 | C | G | 0.240 | 0.021 | 0.0018 | 1.75E-29 | 930624 | 46.375 |
| 154 | rs10822105 | T | A | 0.481 | -0.009 | 0.0017 | 3.53E-08 | 896218 | 15.174 |
| 155 | rs17476364 | C | T | 0.094 | -0.030 | 0.0027 | 1.71E-28 | 929921 | 20.921 |
| 156 | rs1870137 | C | G | 0.199 | -0.012 | 0.0020 | 9.99E-10 | 919991 | 11.900 |
| 157 | rs2243547 | C | A | 0.311 | -0.010 | 0.0017 | 2.16E-08 | 929093 | 13.433 |
| 158 | rs2068888 | A | G | 0.452 | -0.017 | 0.0016 | 2.10E-28 | 918885 | 60.536 |
| 159 | rs61886339 | C | T | 0.299 | -0.013 | 0.0017 | 1.05E-13 | 929802 | 23.169 |
| 160 | rs2862954 | C | T | 0.475 | 0.015 | 0.0016 | 3.37E-22 | 929803 | 46.820 |
| 161 | rs2792751 | T | C | 0.284 | 0.024 | 0.0017 | 5.61E-45 | 929803 | 80.545 |
| 162 | rs17672352 | T | C | 0.179 | -0.020 | 0.0020 | 4.25E-22 | 929794 | 27.455 |
| 163 | rs72826017 | A | T | 0.296 | 0.015 | 0.0020 | 3.04E-13 | 728637 | 22.166 |
| 164 | rs12783584 | C | T | 0.418 | 0.010 | 0.0016 | 7.25E-11 | 927042 | 20.655 |
| 165 | rs7904973 | G | T | 0.425 | -0.021 | 0.0016 | 5.03E-40 | 927109 | 85.708 |
| 166 | rs7124487 | T | C | 0.178 | -0.015 | 0.0021 | 1.17E-12 | 929209 | 14.790 |
| 167 | rs11601507 | A | C | 0.070 | 0.029 | 0.0030 | 3.59E-21 | 929058 | 11.628 |
| 168 | rs214080 | A | G | 0.411 | -0.010 | 0.0016 | 1.79E-09 | 900110 | 17.520 |
| 169 | rs10832954 | G | A | 0.279 | -0.022 | 0.0017 | 4.79E-35 | 927172 | 61.380 |
| 170 | rs34972471 | A | G | 0.252 | 0.018 | 0.0019 | 3.94E-22 | 927917 | 35.273 |
| 171 | rs174566 | G | A | 0.352 | -0.038 | 0.0016 | 9.74E-116 | 925474 | 238.618 |
| 172 | rs642803 | T | C | 0.454 | 0.011 | 0.0016 | 5.65E-12 | 922246 | 23.524 |
| 173 | rs72997616 | A | C | 0.102 | -0.022 | 0.0026 | 1.15E-16 | 929740 | 12.585 |
| 174 | rs7933222 | A | T | 0.198 | -0.013 | 0.0019 | 3.20E-11 | 930483 | 13.990 |
| 175 | rs7350481 | T | C | 0.068 | 0.095 | 0.0031 | 1.00E-200 | 929777 | 119.371 |
| 176 | rs12280753 | T | C | 0.073 | 0.085 | 0.0030 | 7.48E-178 | 929803 | 109.305 |
| 177 | rs10893501 | G | A | 0.135 | 0.035 | 0.0023 | 2.93E-55 | 929803 | 57.264 |
| 178 | rs7316368 | T | C | 0.260 | -0.012 | 0.0018 | 2.02E-11 | 901494 | 17.299 |
| 179 | rs4020660 | A | G | 0.457 | -0.010 | 0.0017 | 1.17E-09 | 870730 | 18.372 |
| 180 | rs17389465 | A | T | 0.067 | -0.034 | 0.0031 | 3.21E-27 | 929205 | 14.661 |
| 181 | rs10843390 | T | C | 0.282 | -0.015 | 0.0017 | 7.64E-18 | 930633 | 29.985 |
| 182 | rs7958600 | C | T | 0.455 | 0.010 | 0.0016 | 1.57E-10 | 930635 | 20.307 |
| 183 | rs111299924 | T | C | 0.339 | -0.019 | 0.0017 | 9.05E-31 | 925145 | 59.608 |
| 184 | rs10876171 | G | A | 0.367 | 0.015 | 0.0017 | 8.55E-19 | 894463 | 36.413 |
| 185 | rs876554 | C | T | 0.479 | 0.009 | 0.0016 | 4.97E-09 | 918177 | 17.070 |
| 186 | rs4764980 | A | G | 0.490 | 0.010 | 0.0016 | 2.73E-10 | 908407 | 19.921 |
| 187 | rs4766602 | C | T | 0.411 | 0.014 | 0.0016 | 1.22E-18 | 917365 | 37.605 |
| 188 | rs3184504 | T | C | 0.469 | -0.028 | 0.0016 | 2.03E-68 | 929803 | 152.214 |
| 189 | rs1169288 | C | A | 0.325 | 0.035 | 0.0017 | 1.79E-99 | 929590 | 196.682 |
| 190 | rs28866344 | A | G | 0.098 | 0.033 | 0.0027 | 2.20E-35 | 915667 | 27.294 |
| 191 | rs61933420 | A | G | 0.075 | -0.029 | 0.0030 | 1.20E-22 | 929714 | 13.325 |
| 192 | rs77502095 | A | G | 0.141 | 0.018 | 0.0024 | 1.70E-14 | 779973 | 14.256 |
| 193 | rs4769036 | T | C | 0.395 | -0.010 | 0.0016 | 3.44E-09 | 894790 | 16.688 |
| 194 | rs12429141 | A | G | 0.252 | -0.010 | 0.0018 | 8.48E-09 | 930625 | 12.502 |
| 195 | rs4942505 | C | T | 0.474 | 0.016 | 0.0016 | 3.85E-25 | 928003 | 53.502 |
| 196 | rs208418 | C | T | 0.373 | 0.010 | 0.0016 | 1.61E-10 | 927970 | 19.125 |
| 197 | rs17447487 | T | C | 0.083 | -0.024 | 0.0029 | 1.68E-17 | 930578 | 11.082 |
| 198 | rs6561534 | T | C | 0.473 | 0.010 | 0.0016 | 9.43E-11 | 930632 | 20.907 |
| 199 | rs1239707 | G | A | 0.431 | -0.010 | 0.0016 | 1.22E-09 | 930637 | 18.119 |
| 200 | rs9592980 | G | A | 0.417 | -0.011 | 0.0016 | 3.15E-12 | 918172 | 23.629 |
| 201 | rs9543956 | T | G | 0.272 | -0.010 | 0.0018 | 1.27E-08 | 902837 | 12.823 |
| 202 | rs9524537 | C | T | 0.226 | 0.011 | 0.0018 | 1.29E-09 | 930638 | 12.883 |
| 203 | rs9559788 | T | C | 0.319 | -0.011 | 0.0017 | 2.69E-10 | 930599 | 17.331 |
| 204 | rs6602909 | C | T | 0.332 | 0.023 | 0.0017 | 4.70E-41 | 891844 | 79.873 |
| 205 | rs9604570 | G | A | 0.179 | -0.021 | 0.0021 | 1.32E-24 | 927310 | 30.815 |
| 206 | rs2273911 | C | T | 0.404 | -0.010 | 0.0016 | 5.18E-10 | 920811 | 18.593 |
| 207 | rs11621792 | T | C | 0.447 | 0.020 | 0.0016 | 7.75E-36 | 899702 | 77.217 |
| 208 | rs11846704 | T | C | 0.267 | -0.011 | 0.0018 | 9.21E-10 | 929970 | 14.672 |
| 209 | rs12147697 | T | C | 0.275 | 0.012 | 0.0018 | 1.55E-11 | 930581 | 18.132 |
| 210 | rs12891651 | A | C | 0.125 | 0.016 | 0.0024 | 5.54E-12 | 929686 | 10.388 |
| 211 | rs11620731 | T | C | 0.147 | -0.019 | 0.0022 | 2.38E-18 | 929795 | 19.146 |
| 212 | rs7150254 | A | G | 0.463 | -0.012 | 0.0016 | 1.83E-13 | 927172 | 26.943 |
| 213 | rs17776811 | A | C | 0.403 | 0.011 | 0.0016 | 1.62E-11 | 924877 | 21.837 |
| 214 | rs17580 | A | T | 0.034 | 0.054 | 0.0043 | 4.46E-36 | 917287 | 10.390 |
| 215 | rs2457228 | G | A | 0.453 | -0.010 | 0.0016 | 8.40E-11 | 916629 | 20.896 |
| 216 | rs11854318 | A | G | 0.265 | -0.022 | 0.0018 | 2.17E-36 | 929902 | 61.827 |
| 217 | rs261290 | T | C | 0.345 | 0.050 | 0.0016 | 1.00E-200 | 927998 | 420.771 |
| 218 | rs633695 | G | A | 0.284 | 0.043 | 0.0017 | 1.91E-137 | 929653 | 253.322 |
| 219 | rs11071754 | C | A | 0.485 | 0.012 | 0.0016 | 4.44E-13 | 920828 | 26.195 |
| 220 | rs11072516 | A | T | 0.423 | 0.013 | 0.0017 | 4.23E-15 | 913272 | 30.065 |
| 221 | rs8043389 | G | T | 0.348 | -0.012 | 0.0016 | 2.56E-12 | 921671 | 22.236 |
| 222 | rs2113260 | T | C | 0.315 | 0.012 | 0.0017 | 2.73E-11 | 912439 | 19.145 |
| 223 | rs12445804 | A | G | 0.077 | 0.031 | 0.0030 | 3.63E-25 | 921735 | 15.231 |
| 224 | rs7498665 | G | A | 0.403 | -0.009 | 0.0016 | 2.87E-08 | 929200 | 14.818 |
| 225 | rs4889685 | C | T | 0.350 | 0.012 | 0.0017 | 9.15E-14 | 917312 | 25.272 |
| 226 | rs247616 | T | C | 0.319 | 0.041 | 0.0017 | 2.49E-129 | 923825 | 254.420 |
| 227 | rs55757091 | A | G | 0.164 | 0.016 | 0.0021 | 4.56E-14 | 930592 | 15.606 |
| 228 | rs11641811 | C | A | 0.477 | -0.019 | 0.0016 | 3.92E-34 | 927984 | 74.039 |
| 229 | rs12924886 | T | A | 0.191 | 0.054 | 0.0020 | 1.05E-164 | 930593 | 231.244 |
| 230 | rs67890964 | C | T | 0.383 | -0.018 | 0.0017 | 2.13E-26 | 899739 | 53.419 |
| 231 | rs7213347 | G | C | 0.301 | 0.013 | 0.0017 | 3.37E-14 | 919973 | 24.200 |
| 232 | rs55714927 | T | C | 0.186 | -0.032 | 0.0021 | 1.23E-53 | 886773 | 71.993 |
| 233 | rs150688657 | A | G | 0.104 | 0.028 | 0.0026 | 1.74E-26 | 929124 | 21.140 |
| 234 | rs10462024 | G | A | 0.416 | 0.011 | 0.0017 | 2.79E-11 | 912438 | 21.535 |
| 235 | rs28811342 | C | T | 0.200 | 0.015 | 0.0020 | 8.89E-14 | 929790 | 17.792 |
| 236 | rs9895443 | G | A | 0.196 | -0.014 | 0.0020 | 3.62E-13 | 927169 | 16.653 |
| 237 | rs8076441 | T | C | 0.302 | -0.020 | 0.0018 | 8.30E-27 | 915102 | 48.441 |
| 238 | rs881844 | C | G | 0.337 | -0.013 | 0.0017 | 1.49E-14 | 922247 | 26.413 |
| 239 | rs2354155 | G | A | 0.472 | 0.011 | 0.0017 | 6.38E-10 | 881325 | 19.041 |
| 240 | rs11869730 | A | T | 0.496 | -0.025 | 0.0017 | 3.12E-52 | 914957 | 115.650 |
| 241 | rs61665404 | A | C | 0.350 | 0.012 | 0.0016 | 3.48E-13 | 930531 | 24.077 |
| 242 | rs17647249 | T | C | 0.499 | 0.014 | 0.0016 | 2.65E-18 | 917334 | 38.067 |
| 243 | rs77542162 | G | A | 0.018 | 0.128 | 0.0060 | 2.23E-101 | 919566 | 16.154 |
| 244 | rs72631343 | G | C | 0.131 | -0.037 | 0.0023 | 2.05E-58 | 929711 | 59.119 |
| 245 | rs2125345 | C | T | 0.291 | -0.016 | 0.0017 | 1.39E-19 | 929744 | 33.821 |
| 246 | rs12451056 | T | C | 0.143 | -0.022 | 0.0022 | 2.80E-23 | 929214 | 24.215 |
| 247 | rs2840354 | T | C | 0.187 | 0.012 | 0.0020 | 6.79E-09 | 929771 | 10.215 |
| 248 | rs77960347 | G | A | 0.012 | 0.174 | 0.0071 | 3.14E-133 | 922946 | 14.424 |
| 249 | rs4939883 | T | C | 0.176 | -0.046 | 0.0020 | 4.31E-112 | 929804 | 146.838 |
| 250 | rs17800291 | C | T | 0.142 | 0.019 | 0.0022 | 8.73E-18 | 929754 | 17.978 |
| 251 | rs62125170 | C | A | 0.212 | -0.014 | 0.0019 | 2.03E-13 | 926433 | 18.036 |
| 252 | rs7351103 | A | G | 0.496 | 0.010 | 0.0016 | 8.57E-10 | 914409 | 18.812 |
| 253 | rs73013159 | T | G | 0.057 | -0.109 | 0.0035 | 1.00E-200 | 927308 | 102.299 |
| 254 | rs73013176 | C | T | 0.012 | -0.182 | 0.0077 | 3.50E-124 | 916116 | 13.320 |
| 255 | rs6511721 | G | A | 0.486 | 0.052 | 0.0017 | 1.00E-200 | 865644 | 485.327 |
| 256 | rs17766692 | T | C | 0.069 | -0.034 | 0.0031 | 7.22E-29 | 930052 | 15.864 |
| 257 | rs72999033 | T | C | 0.064 | -0.126 | 0.0032 | 1.00E-200 | 930544 | 183.010 |
| 258 | rs55737395 | A | G | 0.321 | -0.010 | 0.0017 | 1.68E-08 | 890418 | 13.876 |
| 259 | rs1551891 | A | G | 0.078 | -0.108 | 0.0029 | 1.00E-200 | 929881 | 200.202 |
| 260 | rs10406338 | C | T | 0.339 | 0.063 | 0.0016 | 1.00E-200 | 930585 | 662.403 |
| 261 | rs375972689 | G | T | 0.012 | 0.168 | 0.0077 | 9.72E-105 | 885133 | 11.201 |
| 262 | rs4803836 | A | T | 0.238 | -0.016 | 0.0019 | 2.00E-16 | 886738 | 24.520 |
| 263 | rs3826846 | G | A | 0.356 | -0.014 | 0.0018 | 3.76E-15 | 832856 | 28.347 |
| 264 | rs35313547 | C | T | 0.157 | -0.016 | 0.0021 | 4.11E-14 | 930544 | 15.119 |
| 265 | rs34503352 | A | G | 0.161 | -0.027 | 0.0021 | 4.74E-36 | 930637 | 42.457 |
| 266 | rs11673465 | C | T | 0.210 | 0.011 | 0.0020 | 1.30E-08 | 913271 | 10.727 |
| 267 | rs3746638 | G | A | 0.479 | -0.009 | 0.0016 | 8.45E-09 | 925127 | 16.555 |
| 268 | rs969075 | T | C | 0.335 | -0.013 | 0.0017 | 4.11E-14 | 918197 | 25.449 |
| 269 | rs2618566 | G | T | 0.339 | 0.031 | 0.0017 | 5.83E-74 | 874840 | 148.363 |
| 270 | rs6115204 | A | G | 0.438 | 0.010 | 0.0017 | 7.48E-09 | 917361 | 16.447 |
| 271 | rs224424 | G | A | 0.217 | -0.026 | 0.0019 | 4.94E-43 | 929751 | 64.272 |
| 272 | rs1883711 | C | G | 0.032 | 0.126 | 0.0048 | 1.26E-153 | 917875 | 42.929 |
| 273 | rs6093446 | A | G | 0.269 | 0.027 | 0.0018 | 2.07E-51 | 929790 | 89.488 |
| 274 | rs1800961 | T | C | 0.035 | -0.080 | 0.0043 | 4.12E-78 | 922041 | 23.516 |
| 275 | rs6019547 | A | G | 0.320 | 0.012 | 0.0017 | 1.67E-11 | 919991 | 19.726 |
| 276 | rs62206651 | C | T | 0.448 | 0.013 | 0.0016 | 2.18E-16 | 892051 | 33.353 |
| 277 | rs8126001 | T | C | 0.482 | -0.014 | 0.0017 | 1.06E-15 | 716936 | 32.119 |
| 278 | rs73147887 | G | C | 0.205 | 0.016 | 0.0021 | 5.55E-14 | 784498 | 18.424 |
| 279 | rs2823660 | A | C | 0.427 | 0.009 | 0.0016 | 2.94E-09 | 930608 | 17.236 |
| 280 | rs1474490 | A | C | 0.463 | 0.013 | 0.0016 | 2.93E-16 | 927083 | 33.242 |
| 281 | rs2236459 | G | A | 0.297 | -0.011 | 0.0017 | 5.88E-11 | 919283 | 17.898 |
| 282 | rs4821116 | T | C | 0.204 | -0.023 | 0.0019 | 2.85E-32 | 929722 | 45.425 |
| 283 | rs138774 | G | A | 0.359 | 0.014 | 0.0016 | 3.24E-18 | 917315 | 34.859 |
| 284 | rs138335 | C | G | 0.347 | 0.012 | 0.0017 | 3.15E-12 | 912103 | 22.022 |
| 285 | rs738408 | T | C | 0.227 | -0.027 | 0.0019 | 3.55E-48 | 929714 | 74.649 |
| 286 | rs13057311 | A | G | 0.265 | -0.011 | 0.0018 | 7.63E-10 | 919385 | 14.745 |

**Supplemental Table 3 Instrumental variables for predicting**

**low-density lipoprotein cholesterol**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **SNP** | **A1** | **A2** | **EAF** | **Beta** | **SE** | **P value** | **Sample**  **size** | **F statistic** |
| 1 | rs1123571 | A | G | 0.473 | -0.011 | 0.0017 | 5.26E-11 | 808038 | 21.476 |
| 2 | rs75907879 | T | C | 0.121 | 0.020 | 0.0026 | 2.14E-14 | 807978 | 12.422 |
| 3 | rs10903129 | A | G | 0.458 | -0.025 | 0.0016 | 1.94E-51 | 842628 | 113.037 |
| 4 | rs79778025 | G | A | 0.176 | -0.016 | 0.0024 | 1.33E-11 | 683721 | 13.274 |
| 5 | rs8681 | A | G | 0.255 | -0.013 | 0.0019 | 2.09E-11 | 840014 | 17.054 |
| 6 | rs12732125 | T | C | 0.018 | -0.206 | 0.0064 | 1.00E-200 | 836591 | 37.704 |
| 7 | rs138483078 | A | G | 0.142 | 0.033 | 0.0024 | 1.70E-44 | 839100 | 47.720 |
| 8 | rs553741 | G | C | 0.361 | -0.055 | 0.0018 | 1.00E-200 | 812001 | 460.617 |
| 9 | rs11206517 | G | T | 0.039 | 0.081 | 0.0043 | 1.40E-79 | 842599 | 26.944 |
| 10 | rs12086676 | T | C | 0.174 | -0.027 | 0.0022 | 3.29E-34 | 842632 | 42.753 |
| 11 | rs7534572 | C | G | 0.316 | -0.040 | 0.0019 | 7.60E-100 | 799781 | 194.531 |
| 12 | rs7515577 | C | A | 0.207 | -0.025 | 0.0020 | 5.67E-35 | 842629 | 49.978 |
| 13 | rs4970829 | A | G | 0.072 | -0.110 | 0.0032 | 1.00E-200 | 842567 | 159.348 |
| 14 | rs6670347 | C | T | 0.040 | -0.115 | 0.0042 | 3.18E-166 | 842553 | 57.576 |
| 15 | rs267733 | G | A | 0.153 | -0.019 | 0.0023 | 1.07E-17 | 841666 | 19.018 |
| 16 | rs4390169 | A | G | 0.487 | 0.013 | 0.0016 | 1.48E-14 | 841825 | 29.540 |
| 17 | rs6682862 | A | G | 0.162 | -0.014 | 0.0022 | 8.30E-11 | 842631 | 11.454 |
| 18 | rs1689801 | A | G | 0.322 | 0.015 | 0.0017 | 2.62E-17 | 841811 | 31.268 |
| 19 | rs2296288 | T | C | 0.442 | -0.011 | 0.0017 | 1.58E-11 | 841797 | 22.409 |
| 20 | rs2642438 | A | G | 0.293 | -0.025 | 0.0018 | 3.82E-45 | 829403 | 82.370 |
| 21 | rs7544869 | A | T | 0.458 | -0.010 | 0.0017 | 2.20E-09 | 829345 | 17.768 |
| 22 | rs553427 | C | T | 0.469 | -0.038 | 0.0017 | 1.83E-116 | 839210 | 262.205 |
| 23 | rs10910522 | A | G | 0.433 | -0.011 | 0.0017 | 4.59E-11 | 809327 | 21.283 |
| 24 | rs3738622 | T | G | 0.203 | -0.016 | 0.0021 | 3.81E-15 | 798096 | 19.997 |
| 25 | rs3820897 | T | C | 0.198 | 0.016 | 0.0021 | 7.26E-15 | 826221 | 19.223 |
| 26 | rs880973 | G | A | 0.223 | -0.012 | 0.0020 | 2.22E-09 | 842611 | 12.395 |
| 27 | rs4075673 | T | C | 0.442 | 0.059 | 0.0017 | 1.00E-200 | 842323 | 624.024 |
| 28 | rs1712249 | T | C | 0.249 | -0.072 | 0.0019 | 1.00E-200 | 840009 | 535.117 |
| 29 | rs1260326 | T | C | 0.390 | 0.021 | 0.0017 | 1.41E-36 | 840018 | 75.926 |
| 30 | rs745763 | C | T | 0.168 | 0.018 | 0.0024 | 1.16E-14 | 842316 | 16.662 |
| 31 | rs56266464 | A | G | 0.062 | -0.109 | 0.0034 | 1.00E-200 | 842620 | 118.081 |
| 32 | rs140488605 | T | C | 0.042 | 0.075 | 0.0044 | 4.10E-63 | 831941 | 22.836 |
| 33 | rs360804 | A | G | 0.316 | -0.022 | 0.0018 | 2.70E-35 | 841788 | 66.445 |
| 34 | rs10193634 | C | A | 0.391 | -0.012 | 0.0017 | 6.22E-13 | 829304 | 24.659 |
| 35 | rs2970902 | C | G | 0.344 | 0.012 | 0.0017 | 6.30E-12 | 842607 | 21.319 |
| 36 | rs2465956 | C | T | 0.195 | 0.019 | 0.0021 | 2.57E-20 | 842627 | 26.779 |
| 37 | rs150474434 | A | G | 0.092 | -0.042 | 0.0028 | 7.99E-50 | 842548 | 36.763 |
| 38 | rs17050272 | A | G | 0.426 | -0.020 | 0.0017 | 5.50E-31 | 797825 | 65.531 |
| 39 | rs1375131 | C | T | 0.341 | 0.021 | 0.0021 | 9.67E-23 | 698625 | 43.302 |
| 40 | rs10184376 | T | C | 0.074 | -0.027 | 0.0031 | 2.12E-18 | 842624 | 10.455 |
| 41 | rs10184673 | G | A | 0.409 | 0.020 | 0.0017 | 4.55E-31 | 842537 | 64.962 |
| 42 | rs10932008 | G | A | 0.184 | -0.025 | 0.0022 | 1.26E-28 | 800744 | 36.996 |
| 43 | rs1250259 | T | A | 0.264 | -0.017 | 0.0019 | 2.35E-20 | 841821 | 33.216 |
| 44 | rs887829 | T | C | 0.328 | -0.016 | 0.0017 | 1.09E-19 | 841265 | 36.344 |
| 45 | rs1177809 | G | A | 0.344 | -0.024 | 0.0017 | 3.82E-42 | 832755 | 83.529 |
| 46 | rs6792725 | A | G | 0.325 | 0.016 | 0.0019 | 5.38E-18 | 823767 | 32.791 |
| 47 | rs9837622 | A | T | 0.073 | -0.035 | 0.0032 | 1.23E-27 | 842623 | 15.962 |
| 48 | rs71311871 | G | A | 0.081 | -0.036 | 0.0030 | 2.57E-34 | 842628 | 22.216 |
| 49 | rs55921103 | G | T | 0.364 | -0.011 | 0.0018 | 2.37E-10 | 830158 | 18.584 |
| 50 | rs10936349 | T | C | 0.341 | 0.011 | 0.0018 | 5.07E-10 | 830209 | 17.370 |
| 51 | rs3732359 | G | A | 0.236 | 0.014 | 0.0019 | 4.35E-13 | 840017 | 18.925 |
| 52 | rs12054451 | G | T | 0.260 | 0.015 | 0.0019 | 7.04E-16 | 842630 | 25.060 |
| 53 | rs9824581 | G | A | 0.267 | -0.011 | 0.0018 | 2.58E-09 | 842619 | 13.888 |
| 54 | rs78946096 | G | A | 0.047 | -0.041 | 0.0039 | 1.65E-26 | 831939 | 10.191 |
| 55 | rs6794351 | C | T | 0.240 | -0.012 | 0.0020 | 1.47E-09 | 832818 | 13.341 |
| 56 | rs9653945 | A | G | 0.344 | -0.011 | 0.0017 | 3.61E-11 | 842620 | 19.774 |
| 57 | rs1584688 | C | T | 0.449 | 0.013 | 0.0017 | 2.98E-14 | 830171 | 28.576 |
| 58 | rs56118251 | G | A | 0.155 | 0.015 | 0.0022 | 5.06E-12 | 842614 | 12.486 |
| 59 | rs16861497 | T | G | 0.395 | -0.010 | 0.0017 | 4.37E-09 | 830012 | 16.467 |
| 60 | rs13108218 | A | G | 0.387 | 0.016 | 0.0017 | 3.87E-21 | 824484 | 42.249 |
| 61 | rs4234798 | T | G | 0.393 | -0.010 | 0.0017 | 2.72E-09 | 836904 | 16.877 |
| 62 | rs34707604 | C | T | 0.242 | 0.030 | 0.0023 | 3.42E-38 | 741286 | 61.255 |
| 63 | rs13112099 | G | T | 0.471 | 0.011 | 0.0019 | 8.50E-10 | 749697 | 18.758 |
| 64 | rs342467 | T | C | 0.401 | -0.010 | 0.0017 | 8.75E-09 | 842570 | 15.902 |
| 65 | rs28497720 | T | C | 0.250 | -0.018 | 0.0019 | 6.75E-22 | 842631 | 34.687 |
| 66 | rs17617028 | A | G | 0.223 | 0.015 | 0.0020 | 8.56E-14 | 842621 | 19.293 |
| 67 | rs2085723 | G | T | 0.342 | -0.011 | 0.0017 | 9.85E-10 | 842617 | 16.813 |
| 68 | rs793900 | T | C | 0.408 | 0.011 | 0.0017 | 1.03E-10 | 839708 | 20.172 |
| 69 | rs3010277 | G | A | 0.210 | -0.017 | 0.0020 | 6.88E-18 | 842590 | 24.638 |
| 70 | rs2112653 | C | T | 0.441 | 0.063 | 0.0017 | 1.00E-200 | 828375 | 662.352 |
| 71 | rs13189347 | C | A | 0.448 | -0.017 | 0.0017 | 2.15E-23 | 841710 | 49.127 |
| 72 | rs6894249 | G | A | 0.389 | 0.016 | 0.0017 | 1.05E-20 | 839110 | 41.391 |
| 73 | rs13161656 | C | T | 0.108 | 0.022 | 0.0027 | 2.71E-17 | 841815 | 13.785 |
| 74 | rs12657266 | C | T | 0.365 | -0.033 | 0.0017 | 3.05E-82 | 839179 | 171.095 |
| 75 | rs13357800 | C | T | 0.426 | -0.009 | 0.0017 | 4.06E-08 | 831903 | 14.731 |
| 76 | rs241056 | A | G | 0.256 | -0.011 | 0.0019 | 5.50E-09 | 829084 | 12.953 |
| 77 | rs7746081 | A | G | 0.330 | -0.031 | 0.0017 | 1.42E-71 | 841787 | 141.547 |
| 78 | rs80215559 | C | T | 0.062 | -0.058 | 0.0034 | 2.84E-63 | 841527 | 32.547 |
| 79 | rs71536537 | C | T | 0.473 | -0.026 | 0.0037 | 1.86E-12 | 362589 | 24.744 |
| 80 | rs6689 | G | A | 0.210 | 0.041 | 0.0023 | 1.98E-72 | 822712 | 107.505 |
| 81 | rs11754773 | G | A | 0.098 | -0.027 | 0.0028 | 3.61E-23 | 841788 | 17.330 |
| 82 | rs6940814 | A | G | 0.416 | 0.014 | 0.0017 | 1.70E-16 | 842622 | 33.004 |
| 83 | rs17665178 | G | C | 0.304 | -0.018 | 0.0018 | 4.93E-23 | 827906 | 41.335 |
| 84 | rs6458949 | T | G | 0.259 | 0.013 | 0.0019 | 1.30E-12 | 842632 | 19.320 |
| 85 | rs9496567 | A | G | 0.233 | -0.019 | 0.0019 | 6.07E-22 | 842614 | 33.136 |
| 86 | rs240762 | C | T | 0.406 | 0.013 | 0.0017 | 1.50E-14 | 828573 | 28.505 |
| 87 | rs4946713 | A | C | 0.443 | -0.011 | 0.0017 | 1.03E-10 | 840017 | 20.609 |
| 88 | rs1556857 | C | T | 0.399 | -0.015 | 0.0017 | 1.80E-20 | 842624 | 41.245 |
| 89 | rs72971192 | C | T | 0.237 | -0.013 | 0.0020 | 1.70E-10 | 813539 | 14.751 |
| 90 | rs7758845 | C | A | 0.279 | -0.025 | 0.0018 | 1.06E-41 | 842627 | 73.640 |
| 91 | rs12208357 | T | C | 0.069 | 0.059 | 0.0032 | 2.62E-78 | 842626 | 45.335 |
| 92 | rs117733303 | G | A | 0.017 | 0.142 | 0.0063 | 7.13E-111 | 841753 | 16.827 |
| 93 | rs118039278 | A | G | 0.064 | 0.111 | 0.0034 | 1.00E-200 | 840055 | 128.653 |
| 94 | rs10263252 | A | G | 0.208 | -0.021 | 0.0020 | 4.98E-26 | 835854 | 36.686 |
| 95 | rs55696093 | G | A | 0.206 | 0.038 | 0.0020 | 4.70E-80 | 841792 | 117.448 |
| 96 | rs896311 | G | A | 0.303 | -0.018 | 0.0018 | 5.37E-24 | 831975 | 43.113 |
| 97 | rs56001710 | A | T | 0.426 | -0.018 | 0.0022 | 7.38E-17 | 576522 | 34.025 |
| 98 | rs12533280 | T | C | 0.200 | 0.016 | 0.0021 | 8.96E-15 | 841822 | 19.237 |
| 99 | rs10260606 | C | G | 0.201 | 0.043 | 0.0021 | 1.50E-91 | 813753 | 132.286 |
| 100 | rs42122 | A | G | 0.161 | 0.015 | 0.0023 | 7.41E-11 | 842527 | 11.457 |
| 101 | rs6967728 | A | G | 0.182 | -0.016 | 0.0022 | 2.97E-13 | 830178 | 15.849 |
| 102 | rs564449 | T | G | 0.114 | 0.027 | 0.0026 | 1.07E-25 | 830201 | 22.185 |
| 103 | rs11761517 | T | C | 0.458 | -0.010 | 0.0017 | 1.18E-09 | 805665 | 18.367 |
| 104 | rs2911971 | C | G | 0.374 | -0.012 | 0.0017 | 2.07E-11 | 830142 | 21.027 |
| 105 | rs9987289 | A | G | 0.092 | -0.057 | 0.0028 | 1.34E-92 | 842630 | 69.336 |
| 106 | rs6601302 | T | G | 0.248 | 0.015 | 0.0019 | 1.38E-15 | 834526 | 23.797 |
| 107 | rs900776 | C | A | 0.167 | -0.019 | 0.0022 | 3.01E-18 | 836906 | 21.114 |
| 108 | rs28615248 | C | T | 0.195 | 0.025 | 0.0021 | 3.03E-32 | 841773 | 43.875 |
| 109 | rs9297994 | G | A | 0.339 | 0.032 | 0.0017 | 9.24E-75 | 841712 | 150.012 |
| 110 | rs62509311 | T | A | 0.277 | -0.015 | 0.0019 | 3.60E-16 | 842590 | 26.615 |
| 111 | rs368280 | A | C | 0.253 | 0.011 | 0.0019 | 4.46E-09 | 842633 | 13.007 |
| 112 | rs2737252 | A | G | 0.276 | -0.022 | 0.0018 | 1.48E-33 | 842630 | 58.246 |
| 113 | rs2954017 | T | C | 0.472 | 0.051 | 0.0017 | 1.00E-200 | 832014 | 465.004 |
| 114 | rs11787335 | T | C | 0.353 | 0.024 | 0.0017 | 9.48E-43 | 833060 | 85.805 |
| 115 | rs3780181 | G | A | 0.071 | -0.035 | 0.0032 | 8.09E-27 | 842546 | 15.124 |
| 116 | rs28498684 | A | G | 0.410 | 0.013 | 0.0017 | 6.64E-14 | 830210 | 27.177 |
| 117 | rs12551960 | T | C | 0.079 | 0.033 | 0.0031 | 3.04E-26 | 842612 | 16.421 |
| 118 | rs615552 | C | T | 0.438 | 0.011 | 0.0017 | 7.52E-11 | 827960 | 20.864 |
| 119 | rs7864568 | A | G | 0.321 | -0.016 | 0.0019 | 7.53E-17 | 804264 | 30.310 |
| 120 | rs7046887 | T | C | 0.464 | 0.013 | 0.0016 | 1.14E-15 | 842599 | 31.923 |
| 121 | rs1571536 | T | C | 0.485 | 0.009 | 0.0016 | 4.26E-08 | 841736 | 15.000 |
| 122 | rs2740488 | C | A | 0.260 | -0.021 | 0.0019 | 6.65E-30 | 842019 | 49.657 |
| 123 | rs10818580 | A | G | 0.263 | 0.011 | 0.0019 | 5.78E-09 | 837412 | 13.144 |
| 124 | rs6478851 | A | G | 0.234 | -0.015 | 0.0019 | 1.54E-14 | 839169 | 21.167 |
| 125 | rs2519093 | T | C | 0.189 | 0.073 | 0.0021 | 1.00E-200 | 841807 | 390.975 |
| 126 | rs11999532 | C | G | 0.267 | -0.015 | 0.0018 | 8.71E-16 | 836905 | 25.327 |
| 127 | rs7903259 | G | C | 0.417 | 0.017 | 0.0017 | 4.85E-25 | 812533 | 51.946 |
| 128 | rs10761750 | A | G | 0.488 | 0.015 | 0.0016 | 1.52E-19 | 842629 | 40.868 |
| 129 | rs2068888 | A | G | 0.452 | -0.015 | 0.0016 | 1.11E-20 | 831567 | 43.077 |
| 130 | rs603424 | A | G | 0.169 | 0.014 | 0.0022 | 2.02E-10 | 834113 | 11.362 |
| 131 | rs2792751 | T | C | 0.285 | 0.023 | 0.0018 | 2.29E-38 | 841824 | 68.375 |
| 132 | rs60847460 | T | C | 0.138 | -0.018 | 0.0023 | 1.12E-14 | 841691 | 14.198 |
| 133 | rs4751995 | A | G | 0.470 | -0.016 | 0.0016 | 2.20E-22 | 839148 | 47.188 |
| 134 | rs9423289 | C | T | 0.423 | -0.022 | 0.0017 | 4.71E-40 | 837481 | 85.665 |
| 135 | rs12271225 | T | A | 0.133 | 0.016 | 0.0024 | 2.76E-11 | 841819 | 10.226 |
| 136 | rs11601507 | A | C | 0.070 | 0.040 | 0.0032 | 4.36E-37 | 841664 | 21.079 |
| 137 | rs10832956 | T | C | 0.279 | -0.021 | 0.0018 | 4.94E-31 | 839210 | 53.994 |
| 138 | rs174546 | T | C | 0.347 | -0.044 | 0.0017 | 9.15E-143 | 841824 | 293.394 |
| 139 | rs642803 | T | C | 0.452 | 0.012 | 0.0017 | 1.63E-13 | 834291 | 26.956 |
| 140 | rs2072560 | T | C | 0.065 | 0.044 | 0.0033 | 1.21E-40 | 839194 | 21.565 |
| 141 | rs45505501 | A | G | 0.137 | 0.018 | 0.0024 | 3.27E-14 | 841793 | 13.612 |
| 142 | rs76970536 | A | G | 0.071 | 0.059 | 0.0031 | 1.42E-78 | 841748 | 46.643 |
| 143 | rs34019521 | C | G | 0.252 | 0.019 | 0.0019 | 1.52E-21 | 825347 | 34.267 |
| 144 | rs12320328 | G | A | 0.082 | -0.026 | 0.0030 | 7.23E-18 | 842634 | 11.213 |
| 145 | rs2251024 | T | C | 0.339 | -0.017 | 0.0017 | 2.63E-22 | 837139 | 42.291 |
| 146 | rs9795910 | G | A | 0.376 | -0.012 | 0.0017 | 1.42E-12 | 830075 | 23.537 |
| 147 | rs7300593 | C | T | 0.172 | 0.013 | 0.0022 | 1.34E-09 | 838316 | 10.470 |
| 148 | rs11105294 | A | G | 0.339 | 0.012 | 0.0018 | 2.33E-12 | 830192 | 22.044 |
| 149 | rs4760388 | T | C | 0.478 | -0.010 | 0.0016 | 1.50E-09 | 829037 | 18.235 |
| 150 | rs7955221 | C | A | 0.453 | -0.012 | 0.0017 | 1.02E-11 | 829349 | 22.939 |
| 151 | rs3184504 | T | C | 0.468 | -0.025 | 0.0016 | 4.56E-53 | 841824 | 117.094 |
| 152 | rs1169288 | C | A | 0.326 | 0.035 | 0.0018 | 9.94E-91 | 841612 | 179.337 |
| 153 | rs825474 | G | A | 0.416 | -0.009 | 0.0017 | 4.46E-08 | 837408 | 14.548 |
| 154 | rs11057841 | T | C | 0.142 | 0.021 | 0.0024 | 5.48E-18 | 835092 | 18.203 |
| 155 | rs77502095 | A | G | 0.141 | 0.016 | 0.0025 | 1.08E-10 | 713371 | 10.096 |
| 156 | rs7327867 | G | A | 0.474 | 0.019 | 0.0017 | 2.01E-31 | 835703 | 67.815 |
| 157 | rs207637 | G | T | 0.385 | 0.011 | 0.0017 | 3.08E-10 | 832806 | 18.765 |
| 158 | rs9805560 | G | A | 0.465 | 0.011 | 0.0017 | 3.84E-11 | 835654 | 21.740 |
| 159 | rs9524538 | A | G | 0.235 | 0.017 | 0.0019 | 1.38E-19 | 838265 | 29.472 |
| 160 | rs551473284 | T | C | 0.367 | -0.015 | 0.0021 | 4.78E-13 | 543540 | 24.297 |
| 161 | rs6602909 | C | T | 0.332 | 0.016 | 0.0018 | 2.37E-19 | 805198 | 35.887 |
| 162 | rs12016920 | C | T | 0.192 | -0.017 | 0.0021 | 4.72E-15 | 829436 | 19.044 |
| 163 | rs11621792 | T | C | 0.448 | 0.021 | 0.0017 | 9.39E-35 | 826464 | 74.798 |
| 164 | rs11846704 | T | C | 0.267 | -0.012 | 0.0018 | 2.42E-11 | 842549 | 17.456 |
| 165 | rs11620731 | T | C | 0.147 | -0.025 | 0.0023 | 1.07E-26 | 837502 | 28.689 |
| 166 | rs13379043 | C | T | 0.268 | -0.016 | 0.0018 | 2.03E-18 | 834094 | 30.078 |
| 167 | rs11159099 | G | A | 0.461 | -0.010 | 0.0017 | 1.17E-08 | 834891 | 16.167 |
| 168 | rs17776811 | A | C | 0.403 | 0.011 | 0.0017 | 2.42E-10 | 836904 | 19.294 |
| 169 | rs28375625 | A | C | 0.459 | -0.009 | 0.0017 | 2.33E-08 | 830211 | 15.493 |
| 170 | rs11635502 | A | G | 0.306 | 0.013 | 0.0018 | 1.62E-12 | 842632 | 21.192 |
| 171 | rs11638576 | A | G | 0.396 | 0.015 | 0.0018 | 1.14E-16 | 825292 | 32.868 |
| 172 | rs2469204 | G | T | 0.379 | -0.009 | 0.0017 | 4.27E-08 | 838211 | 14.132 |
| 173 | rs8041391 | T | C | 0.154 | 0.015 | 0.0024 | 5.72E-10 | 836905 | 10.010 |
| 174 | rs756559 | G | A | 0.310 | -0.011 | 0.0018 | 9.42E-10 | 838309 | 16.017 |
| 175 | rs12445804 | A | G | 0.077 | 0.029 | 0.0032 | 4.59E-20 | 834346 | 11.961 |
| 176 | rs11075253 | A | C | 0.302 | 0.011 | 0.0018 | 6.27E-09 | 826118 | 14.228 |
| 177 | rs7184567 | T | C | 0.375 | 0.011 | 0.0017 | 6.27E-11 | 829378 | 20.032 |
| 178 | rs247617 | A | C | 0.319 | -0.035 | 0.0017 | 2.97E-87 | 841805 | 170.370 |
| 179 | rs7206039 | A | C | 0.371 | 0.012 | 0.0018 | 5.90E-12 | 802570 | 22.106 |
| 180 | rs12924886 | T | A | 0.192 | 0.054 | 0.0021 | 3.81E-150 | 838272 | 211.386 |
| 181 | rs7202323 | G | T | 0.227 | -0.021 | 0.0020 | 2.93E-26 | 842622 | 39.446 |
| 182 | rs7404072 | C | T | 0.289 | -0.011 | 0.0018 | 8.52E-09 | 828487 | 13.625 |
| 183 | rs67890964 | C | T | 0.385 | -0.019 | 0.0018 | 7.87E-27 | 813322 | 54.461 |
| 184 | rs55714927 | T | C | 0.187 | -0.035 | 0.0022 | 6.56E-58 | 800191 | 78.251 |
| 185 | rs150688657 | A | G | 0.103 | 0.021 | 0.0027 | 1.14E-14 | 841730 | 11.019 |
| 186 | rs10462024 | G | A | 0.415 | 0.010 | 0.0017 | 2.16E-09 | 824484 | 17.396 |
| 187 | rs28811342 | C | T | 0.200 | 0.013 | 0.0021 | 8.32E-10 | 841811 | 12.059 |
| 188 | rs9909417 | A | G | 0.288 | 0.010 | 0.0018 | 2.01E-08 | 838528 | 12.914 |
| 189 | rs704 | A | G | 0.478 | 0.020 | 0.0016 | 2.10E-35 | 836905 | 76.956 |
| 190 | rs67777803 | T | G | 0.168 | -0.015 | 0.0022 | 3.63E-11 | 837423 | 12.245 |
| 191 | rs6505220 | T | A | 0.468 | -0.014 | 0.0019 | 2.57E-13 | 781241 | 26.648 |
| 192 | rs62075782 | C | G | 0.226 | -0.012 | 0.0021 | 1.33E-08 | 823076 | 11.298 |
| 193 | rs11870935 | G | A | 0.491 | 0.025 | 0.0016 | 1.38E-51 | 842619 | 114.140 |
| 194 | rs62075819 | T | C | 0.358 | 0.010 | 0.0018 | 8.50E-09 | 832740 | 15.242 |
| 195 | rs2665404 | C | T | 0.459 | -0.011 | 0.0017 | 6.43E-11 | 828554 | 21.199 |
| 196 | rs1801689 | C | A | 0.024 | 0.095 | 0.0052 | 1.06E-74 | 836051 | 15.857 |
| 197 | rs17647249 | T | C | 0.499 | 0.013 | 0.0017 | 2.14E-15 | 829373 | 31.467 |
| 198 | rs77542162 | G | A | 0.018 | 0.169 | 0.0063 | 1.57E-160 | 837446 | 25.768 |
| 199 | rs72631343 | G | C | 0.131 | -0.041 | 0.0024 | 1.34E-64 | 841731 | 65.582 |
| 200 | rs2125345 | C | T | 0.291 | -0.018 | 0.0018 | 1.71E-23 | 841762 | 41.170 |
| 201 | rs12451056 | T | C | 0.143 | -0.020 | 0.0023 | 1.38E-18 | 841819 | 18.976 |
| 202 | rs4939883 | T | C | 0.175 | -0.016 | 0.0021 | 4.65E-14 | 841825 | 16.422 |
| 203 | rs12454507 | G | A | 0.288 | 0.011 | 0.0019 | 2.01E-08 | 717662 | 12.912 |
| 204 | rs1618633 | G | C | 0.353 | 0.014 | 0.0021 | 1.17E-10 | 757539 | 18.961 |
| 205 | rs4804815 | G | C | 0.264 | -0.012 | 0.0019 | 1.05E-09 | 798043 | 14.466 |
| 206 | rs144900553 | T | C | 0.014 | -0.158 | 0.0076 | 3.52E-95 | 836412 | 11.496 |
| 207 | rs1109375 | G | C | 0.170 | -0.071 | 0.0022 | 1.00E-200 | 838108 | 298.909 |
| 208 | rs2738445 | C | T | 0.430 | -0.053 | 0.0017 | 1.00E-200 | 825448 | 496.137 |
| 209 | rs7250652 | G | A | 0.439 | 0.025 | 0.0017 | 1.65E-50 | 830782 | 110.049 |
| 210 | rs58542926 | T | C | 0.075 | -0.099 | 0.0031 | 1.00E-200 | 842523 | 141.704 |
| 211 | rs62119267 | C | A | 0.020 | -0.233 | 0.0059 | 1.00E-200 | 841289 | 59.870 |
| 212 | rs531660643 | T | G | 0.016 | -0.413 | 0.0073 | 1.00E-200 | 701385 | 100.737 |
| 213 | rs113330691 | A | G | 0.033 | -0.230 | 0.0046 | 1.00E-200 | 836850 | 161.761 |
| 214 | rs41289514 | G | A | 0.010 | 0.216 | 0.0086 | 3.04E-140 | 832849 | 12.174 |
| 215 | rs146275714 | A | G | 0.028 | 0.174 | 0.0054 | 1.00E-200 | 837112 | 57.238 |
| 216 | rs35313547 | C | T | 0.158 | -0.015 | 0.0022 | 5.83E-11 | 842540 | 11.408 |
| 217 | rs34503352 | A | G | 0.161 | -0.029 | 0.0023 | 4.27E-37 | 842632 | 43.751 |
| 218 | rs73066228 | G | A | 0.164 | 0.017 | 0.0022 | 9.29E-15 | 837148 | 16.464 |
| 219 | rs6107650 | G | A | 0.390 | -0.011 | 0.0017 | 1.94E-10 | 832824 | 19.284 |
| 220 | rs438568 | A | G | 0.392 | -0.013 | 0.0017 | 2.84E-15 | 838288 | 29.732 |
| 221 | rs969075 | T | C | 0.334 | -0.015 | 0.0018 | 9.98E-18 | 830210 | 32.708 |
| 222 | rs2618566 | G | T | 0.339 | 0.040 | 0.0018 | 8.46E-111 | 790363 | 224.246 |
| 223 | rs1044573 | G | A | 0.495 | 0.010 | 0.0017 | 4.28E-09 | 836905 | 17.245 |
| 224 | rs61016611 | A | G | 0.101 | -0.032 | 0.0027 | 1.36E-32 | 841822 | 25.668 |
| 225 | rs1883711 | C | G | 0.032 | 0.128 | 0.0050 | 5.99E-145 | 834996 | 40.964 |
| 226 | rs6093446 | A | G | 0.269 | 0.024 | 0.0019 | 2.78E-38 | 837496 | 65.828 |
| 227 | rs4239702 | T | C | 0.282 | -0.011 | 0.0018 | 1.27E-09 | 837412 | 14.925 |
| 228 | rs2295027 | A | G | 0.321 | 0.012 | 0.0018 | 4.86E-11 | 831966 | 18.846 |
| 229 | rs35046559 | G | A | 0.246 | 0.012 | 0.0019 | 3.05E-10 | 839788 | 14.705 |
| 230 | rs8121509 | C | T | 0.452 | -0.014 | 0.0018 | 3.75E-15 | 682728 | 30.631 |
| 231 | rs60417583 | T | G | 0.165 | 0.015 | 0.0024 | 5.92E-10 | 719937 | 10.567 |
| 232 | rs414850 | C | A | 0.411 | -0.012 | 0.0017 | 7.89E-12 | 837490 | 22.656 |
| 233 | rs235343 | A | C | 0.436 | -0.009 | 0.0017 | 3.19E-08 | 827099 | 15.044 |
| 234 | rs5746498 | C | T | 0.237 | 0.014 | 0.0020 | 6.60E-12 | 823657 | 17.050 |
| 235 | rs4465 | C | T | 0.358 | 0.014 | 0.0017 | 6.62E-17 | 829354 | 32.078 |
| 236 | rs138335 | C | G | 0.347 | 0.013 | 0.0018 | 9.17E-13 | 824251 | 23.120 |
| 237 | rs3747207 | A | G | 0.226 | -0.014 | 0.0020 | 1.03E-12 | 841712 | 17.768 |
| 238 | rs13057311 | A | G | 0.267 | -0.012 | 0.0019 | 2.22E-10 | 827099 | 15.759 |

**Supplemental Table 4 Instrumental variables for predicting**

**high-density lipoprotein cholesterol**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **SNP** | **A1** | **A2** | **EAF** | **Beta** | **SE** | **P value** | **Sample**  **size** | **F statistic** |
| 1 | rs13303368 | G | C | 0.414 | 0.011 | 0.0018 | 1.85E-09 | 762134 | 17.529 |
| 2 | rs72629496 | A | G | 0.166 | -0.013 | 0.0022 | 1.11E-09 | 882186 | 10.278 |
| 3 | rs1767141 | A | C | 0.094 | -0.024 | 0.0028 | 2.20E-18 | 888059 | 13.006 |
| 4 | rs75460349 | C | A | 0.024 | -0.084 | 0.0052 | 2.83E-60 | 883435 | 12.411 |
| 5 | rs7541031 | T | C | 0.274 | -0.012 | 0.0018 | 8.44E-12 | 858701 | 18.564 |
| 6 | rs3768321 | T | G | 0.191 | -0.044 | 0.0021 | 2.16E-101 | 888127 | 141.253 |
| 7 | rs1168040 | T | C | 0.318 | -0.012 | 0.0018 | 2.14E-12 | 875764 | 21.406 |
| 8 | rs6663226 | T | A | 0.365 | 0.010 | 0.0017 | 2.28E-09 | 888124 | 16.558 |
| 9 | rs2613496 | T | C | 0.180 | 0.015 | 0.0021 | 3.37E-12 | 888166 | 14.306 |
| 10 | rs11161570 | T | C | 0.497 | 0.009 | 0.0016 | 2.40E-08 | 887930 | 15.570 |
| 11 | rs3767964 | T | C | 0.362 | 0.027 | 0.0017 | 2.10E-59 | 885529 | 122.045 |
| 12 | rs629301 | G | T | 0.219 | 0.038 | 0.0019 | 1.18E-87 | 888164 | 134.760 |
| 13 | rs3815026 | C | G | 0.471 | -0.023 | 0.0026 | 9.86E-20 | 564223 | 41.183 |
| 14 | rs267738 | G | T | 0.209 | 0.023 | 0.0020 | 2.91E-32 | 887359 | 46.234 |
| 15 | rs12028554 | A | G | 0.437 | -0.009 | 0.0016 | 4.27E-08 | 877511 | 14.773 |
| 16 | rs3806415 | T | C | 0.323 | 0.014 | 0.0017 | 2.90E-17 | 879226 | 31.231 |
| 17 | rs2502806 | A | G | 0.393 | -0.011 | 0.0017 | 4.02E-10 | 875762 | 18.656 |
| 18 | rs4077194 | G | T | 0.487 | 0.019 | 0.0016 | 7.09E-32 | 887139 | 68.986 |
| 19 | rs1689796 | G | T | 0.325 | -0.027 | 0.0017 | 1.01E-57 | 887353 | 112.543 |
| 20 | rs10911505 | C | T | 0.357 | -0.009 | 0.0017 | 1.70E-08 | 876979 | 14.605 |
| 21 | rs12143329 | T | C | 0.403 | 0.011 | 0.0016 | 3.73E-12 | 873559 | 23.224 |
| 22 | rs3767298 | A | G | 0.179 | -0.014 | 0.0021 | 5.67E-11 | 888099 | 12.618 |
| 23 | rs3747973 | A | G | 0.414 | -0.015 | 0.0016 | 6.45E-20 | 875656 | 40.505 |
| 24 | rs12023488 | T | C | 0.374 | 0.009 | 0.0017 | 1.08E-08 | 882700 | 15.308 |
| 25 | rs1415293 | T | A | 0.312 | 0.018 | 0.0017 | 1.74E-25 | 888189 | 46.736 |
| 26 | rs2642438 | A | G | 0.293 | -0.026 | 0.0018 | 1.26E-48 | 874931 | 88.984 |
| 27 | rs4846914 | G | A | 0.402 | -0.046 | 0.0016 | 1.72E-176 | 884728 | 385.898 |
| 28 | rs553427 | C | T | 0.469 | -0.017 | 0.0016 | 8.52E-26 | 884728 | 54.930 |
| 29 | rs6710091 | G | C | 0.351 | 0.016 | 0.0017 | 4.76E-22 | 882440 | 42.456 |
| 30 | rs10188334 | T | C | 0.169 | 0.015 | 0.0022 | 1.53E-12 | 887311 | 14.047 |
| 31 | rs6542680 | C | T | 0.197 | 0.022 | 0.0020 | 8.13E-28 | 860289 | 37.810 |
| 32 | rs2090032 | C | G | 0.491 | -0.012 | 0.0016 | 2.70E-14 | 887886 | 28.961 |
| 33 | rs6728178 | A | G | 0.238 | 0.057 | 0.0019 | 1.00E-200 | 888156 | 340.953 |
| 34 | rs6723650 | C | A | 0.455 | -0.009 | 0.0016 | 1.52E-08 | 878236 | 15.887 |
| 35 | rs1988650 | T | C | 0.209 | 0.012 | 0.0020 | 8.75E-09 | 888086 | 10.944 |
| 36 | rs17326656 | T | G | 0.228 | -0.013 | 0.0019 | 2.24E-12 | 888192 | 17.342 |
| 37 | rs805317 | A | T | 0.453 | 0.012 | 0.0016 | 9.82E-13 | 888191 | 25.216 |
| 38 | rs1861410 | C | T | 0.451 | -0.012 | 0.0016 | 8.41E-14 | 882693 | 27.587 |
| 39 | rs980183 | G | A | 0.388 | -0.009 | 0.0016 | 4.31E-08 | 888176 | 14.249 |
| 40 | rs2540949 | T | A | 0.387 | 0.017 | 0.0016 | 8.55E-24 | 887317 | 47.992 |
| 41 | rs7586605 | C | T | 0.268 | -0.012 | 0.0018 | 4.07E-11 | 887524 | 17.098 |
| 42 | rs6750720 | G | C | 0.336 | 0.012 | 0.0017 | 1.02E-12 | 888193 | 22.666 |
| 43 | rs11688682 | C | G | 0.249 | 0.018 | 0.0022 | 9.76E-17 | 755908 | 25.813 |
| 44 | rs3739020 | G | T | 0.229 | 0.018 | 0.0020 | 6.76E-19 | 824753 | 27.838 |
| 45 | rs1484917 | A | G | 0.398 | -0.010 | 0.0016 | 4.36E-09 | 875757 | 16.512 |
| 46 | rs62189714 | A | C | 0.432 | 0.010 | 0.0017 | 1.78E-09 | 873474 | 17.765 |
| 47 | rs13389219 | T | C | 0.403 | 0.029 | 0.0016 | 7.18E-71 | 885463 | 152.468 |
| 48 | rs3754749 | G | A | 0.170 | 0.013 | 0.0021 | 1.49E-09 | 888074 | 10.315 |
| 49 | rs13404250 | T | C | 0.331 | 0.010 | 0.0017 | 1.14E-09 | 888165 | 16.419 |
| 50 | rs7581601 | C | A | 0.317 | -0.017 | 0.0017 | 9.63E-23 | 887175 | 41.723 |
| 51 | rs1047891 | A | C | 0.304 | -0.016 | 0.0018 | 3.83E-19 | 877448 | 33.836 |
| 52 | rs78058190 | A | G | 0.053 | -0.075 | 0.0042 | 1.39E-72 | 855037 | 32.534 |
| 53 | rs2943652 | C | T | 0.369 | 0.036 | 0.0017 | 6.83E-106 | 887257 | 222.500 |
| 54 | rs11694828 | A | G | 0.444 | 0.016 | 0.0017 | 1.13E-21 | 864100 | 45.169 |
| 55 | rs4675812 | G | A | 0.409 | -0.014 | 0.0016 | 4.04E-17 | 879194 | 34.208 |
| 56 | rs13076933 | G | T | 0.256 | -0.013 | 0.0018 | 5.55E-13 | 888052 | 19.808 |
| 57 | rs2455850 | A | C | 0.313 | -0.013 | 0.0018 | 4.18E-14 | 856055 | 24.549 |
| 58 | rs7622114 | C | A | 0.431 | -0.014 | 0.0016 | 8.92E-18 | 888191 | 36.168 |
| 59 | rs2305637 | T | C | 0.170 | -0.023 | 0.0022 | 3.71E-27 | 865894 | 32.875 |
| 60 | rs7613875 | C | A | 0.478 | 0.023 | 0.0016 | 2.00E-45 | 887999 | 99.858 |
| 61 | rs33999310 | A | G | 0.104 | 0.029 | 0.0026 | 4.00E-29 | 888177 | 23.386 |
| 62 | rs4597680 | T | C | 0.211 | 0.012 | 0.0020 | 1.33E-09 | 875713 | 12.242 |
| 63 | rs9968060 | C | T | 0.366 | 0.010 | 0.0017 | 1.67E-08 | 869461 | 14.781 |
| 64 | rs4855447 | A | G | 0.208 | 0.013 | 0.0020 | 1.57E-10 | 885526 | 13.488 |
| 65 | rs687339 | C | T | 0.216 | 0.027 | 0.0020 | 7.01E-43 | 888089 | 63.823 |
| 66 | rs12635093 | T | C | 0.244 | 0.012 | 0.0019 | 7.61E-11 | 888149 | 15.626 |
| 67 | rs10049088 | T | C | 0.383 | 0.023 | 0.0016 | 7.38E-43 | 879075 | 89.015 |
| 68 | rs1516725 | T | C | 0.133 | -0.030 | 0.0024 | 1.53E-36 | 887360 | 36.762 |
| 69 | rs938587 | A | T | 0.263 | -0.013 | 0.0018 | 7.42E-13 | 874903 | 19.938 |
| 70 | rs35374654 | T | A | 0.223 | 0.020 | 0.0020 | 6.98E-22 | 860349 | 32.032 |
| 71 | rs6772271 | C | T | 0.285 | -0.011 | 0.0018 | 2.84E-09 | 877402 | 14.384 |
| 72 | rs34311866 | C | T | 0.185 | -0.018 | 0.0021 | 3.72E-18 | 882439 | 22.756 |
| 73 | rs11734408 | G | A | 0.298 | 0.010 | 0.0017 | 4.79E-09 | 886774 | 14.339 |
| 74 | rs12502605 | C | T | 0.180 | -0.018 | 0.0021 | 1.70E-18 | 887309 | 22.734 |
| 75 | rs2376180 | T | A | 0.489 | -0.009 | 0.0016 | 3.74E-08 | 857871 | 15.132 |
| 76 | rs12641981 | T | C | 0.427 | -0.011 | 0.0016 | 2.06E-12 | 885560 | 24.185 |
| 77 | rs7656088 | T | C | 0.475 | 0.010 | 0.0016 | 1.43E-09 | 875736 | 18.266 |
| 78 | rs1714008 | G | A | 0.414 | -0.009 | 0.0016 | 3.81E-08 | 888147 | 14.674 |
| 79 | rs35662434 | G | A | 0.214 | 0.015 | 0.0021 | 1.45E-12 | 836335 | 16.861 |
| 80 | rs7686914 | C | T | 0.471 | 0.012 | 0.0018 | 2.79E-10 | 774839 | 19.842 |
| 81 | rs7658703 | C | T | 0.198 | -0.012 | 0.0020 | 1.91E-09 | 888188 | 11.454 |
| 82 | rs3775217 | G | A | 0.378 | 0.015 | 0.0016 | 4.59E-20 | 888189 | 39.572 |
| 83 | rs28418580 | T | C | 0.463 | -0.019 | 0.0016 | 5.33E-34 | 888101 | 73.486 |
| 84 | rs36137963 | T | A | 0.354 | -0.010 | 0.0017 | 5.09E-09 | 888131 | 15.621 |
| 85 | rs1133483 | G | C | 0.430 | 0.011 | 0.0016 | 1.16E-11 | 888150 | 22.566 |
| 86 | rs13107325 | T | C | 0.060 | -0.081 | 0.0033 | 2.40E-135 | 888191 | 68.728 |
| 87 | rs62328321 | C | T | 0.364 | -0.012 | 0.0017 | 1.48E-12 | 885500 | 23.185 |
| 88 | rs930457 | C | T | 0.352 | -0.010 | 0.0017 | 1.77E-09 | 888072 | 16.519 |
| 89 | rs2290846 | A | G | 0.271 | -0.012 | 0.0018 | 1.24E-10 | 888190 | 16.357 |
| 90 | rs1425485 | T | C | 0.230 | 0.021 | 0.0019 | 2.59E-27 | 888188 | 41.515 |
| 91 | rs61731455 | G | A | 0.185 | 0.013 | 0.0021 | 5.40E-10 | 884136 | 11.618 |
| 92 | rs7707821 | A | G | 0.402 | -0.010 | 0.0017 | 3.84E-09 | 885552 | 16.685 |
| 93 | rs1664781 | G | A | 0.314 | 0.016 | 0.0017 | 8.02E-20 | 888188 | 35.778 |
| 94 | rs157521 | T | G | 0.451 | 0.012 | 0.0016 | 7.23E-15 | 888182 | 29.977 |
| 95 | rs28650790 | T | C | 0.176 | -0.031 | 0.0021 | 5.59E-49 | 888165 | 62.763 |
| 96 | rs1421656 | A | G | 0.282 | -0.014 | 0.0018 | 2.17E-15 | 880039 | 25.473 |
| 97 | rs2307111 | C | T | 0.394 | 0.016 | 0.0016 | 1.13E-21 | 888190 | 43.686 |
| 98 | rs9293683 | C | T | 0.338 | -0.011 | 0.0017 | 1.17E-10 | 878782 | 18.578 |
| 99 | rs2911136 | G | C | 0.367 | 0.011 | 0.0017 | 5.34E-11 | 888186 | 20.002 |
| 100 | rs7732198 | C | T | 0.472 | -0.010 | 0.0016 | 2.08E-10 | 888182 | 20.131 |
| 101 | rs12234017 | G | A | 0.259 | 0.015 | 0.0018 | 8.52E-17 | 888107 | 26.595 |
| 102 | rs72801474 | A | G | 0.096 | 0.028 | 0.0028 | 4.66E-23 | 888008 | 17.036 |
| 103 | rs254560 | A | G | 0.412 | -0.010 | 0.0016 | 1.30E-10 | 888110 | 20.011 |
| 104 | rs891984 | A | T | 0.366 | 0.009 | 0.0017 | 4.43E-08 | 848646 | 13.900 |
| 105 | rs10463352 | A | G | 0.425 | 0.011 | 0.0016 | 4.25E-12 | 881126 | 23.462 |
| 106 | rs1438588 | A | G | 0.366 | 0.012 | 0.0017 | 1.21E-12 | 881861 | 23.422 |
| 107 | rs1650527 | T | C | 0.226 | -0.021 | 0.0019 | 1.35E-27 | 887330 | 41.457 |
| 108 | rs7732603 | C | A | 0.278 | 0.012 | 0.0018 | 5.17E-11 | 887241 | 17.307 |
| 109 | rs10039241 | A | G | 0.149 | 0.018 | 0.0022 | 2.86E-15 | 887320 | 15.815 |
| 110 | rs1240808 | G | A | 0.344 | 0.011 | 0.0017 | 2.08E-11 | 887331 | 20.261 |
| 111 | rs76716928 | G | C | 0.364 | -0.021 | 0.0018 | 1.80E-29 | 871072 | 58.834 |
| 112 | rs2744944 | A | C | 0.363 | -0.031 | 0.0017 | 2.38E-74 | 874819 | 153.928 |
| 113 | rs2267662 | C | A | 0.147 | 0.018 | 0.0023 | 8.09E-16 | 877561 | 16.263 |
| 114 | rs4714556 | G | A | 0.382 | 0.015 | 0.0017 | 8.45E-19 | 883677 | 37.014 |
| 115 | rs6905288 | G | A | 0.442 | 0.026 | 0.0017 | 6.58E-57 | 830992 | 124.686 |
| 116 | rs9367175 | A | G | 0.306 | 0.013 | 0.0017 | 1.04E-14 | 887569 | 25.406 |
| 117 | rs4714902 | C | A | 0.343 | 0.011 | 0.0018 | 1.17E-09 | 840967 | 16.688 |
| 118 | rs9447497 | C | T | 0.364 | 0.009 | 0.0017 | 2.71E-08 | 885560 | 14.310 |
| 119 | rs9342045 | C | T | 0.451 | -0.011 | 0.0016 | 3.07E-11 | 878372 | 21.853 |
| 120 | rs72934503 | G | A | 0.461 | 0.011 | 0.0020 | 3.42E-08 | 551838 | 15.133 |
| 121 | rs4946955 | G | C | 0.307 | -0.017 | 0.0017 | 2.31E-23 | 888189 | 42.203 |
| 122 | rs9374588 | A | G | 0.326 | 0.014 | 0.0017 | 1.14E-16 | 888068 | 30.199 |
| 123 | rs2800708 | C | T | 0.471 | 0.021 | 0.0016 | 1.61E-40 | 888101 | 88.518 |
| 124 | rs55888929 | T | C | 0.153 | 0.016 | 0.0022 | 7.02E-13 | 887595 | 13.358 |
| 125 | rs17585887 | T | C | 0.421 | -0.023 | 0.0016 | 6.85E-45 | 888165 | 96.362 |
| 126 | rs672341 | A | G | 0.404 | 0.014 | 0.0016 | 7.45E-17 | 888100 | 33.494 |
| 127 | rs11751347 | T | C | 0.094 | -0.057 | 0.0027 | 6.66E-95 | 888084 | 72.698 |
| 128 | rs73029263 | G | A | 0.130 | 0.017 | 0.0024 | 1.64E-12 | 888168 | 11.281 |
| 129 | rs1007766 | G | A | 0.490 | 0.010 | 0.0016 | 1.34E-09 | 870159 | 18.371 |
| 130 | rs34409228 | T | C | 0.126 | 0.029 | 0.0024 | 2.01E-33 | 875666 | 31.965 |
| 131 | rs79949326 | T | C | 0.249 | 0.030 | 0.0019 | 1.73E-56 | 882643 | 93.811 |
| 132 | rs6460894 | C | T | 0.324 | -0.011 | 0.0017 | 7.43E-11 | 882658 | 18.575 |
| 133 | rs6968554 | A | G | 0.365 | 0.013 | 0.0017 | 3.15E-15 | 879470 | 28.820 |
| 134 | rs10242866 | T | C | 0.392 | -0.023 | 0.0016 | 7.13E-46 | 882676 | 96.365 |
| 135 | rs73068475 | A | G | 0.124 | -0.017 | 0.0024 | 5.52E-13 | 881720 | 11.299 |
| 136 | rs12533197 | G | T | 0.445 | -0.016 | 0.0016 | 8.05E-23 | 873727 | 47.769 |
| 137 | rs2534600 | A | C | 0.418 | -0.013 | 0.0017 | 3.12E-14 | 872065 | 28.054 |
| 138 | rs9648555 | G | A | 0.454 | 0.009 | 0.0016 | 5.45E-09 | 881846 | 16.868 |
| 139 | rs876039 | C | G | 0.312 | 0.015 | 0.0017 | 8.41E-19 | 879093 | 33.660 |
| 140 | rs55747707 | A | G | 0.194 | 0.039 | 0.0020 | 3.31E-81 | 882059 | 113.931 |
| 141 | rs1761662 | T | C | 0.463 | 0.011 | 0.0016 | 1.01E-12 | 882477 | 25.274 |
| 142 | rs854562 | T | C | 0.313 | -0.011 | 0.0017 | 9.45E-10 | 882692 | 16.100 |
| 143 | rs6944945 | A | G | 0.317 | -0.010 | 0.0017 | 2.25E-08 | 881002 | 13.539 |
| 144 | rs257377 | T | G | 0.198 | 0.013 | 0.0020 | 4.27E-11 | 882571 | 13.812 |
| 145 | rs39324 | G | A | 0.367 | -0.013 | 0.0017 | 3.78E-15 | 872774 | 28.721 |
| 146 | rs111731678 | A | T | 0.196 | -0.013 | 0.0022 | 9.40E-10 | 726075 | 11.802 |
| 147 | rs11762784 | A | G | 0.495 | 0.030 | 0.0016 | 5.47E-73 | 870259 | 163.280 |
| 148 | rs357409 | C | T | 0.367 | 0.010 | 0.0018 | 5.52E-09 | 839473 | 15.797 |
| 149 | rs10273527 | T | G | 0.235 | 0.013 | 0.0019 | 2.25E-11 | 879953 | 16.086 |
| 150 | rs11766379 | C | T | 0.246 | -0.018 | 0.0019 | 2.95E-21 | 882681 | 33.231 |
| 151 | rs73165503 | C | G | 0.096 | -0.028 | 0.0027 | 5.49E-25 | 882691 | 18.414 |
| 152 | rs2928577 | G | A | 0.387 | -0.010 | 0.0017 | 6.12E-09 | 875687 | 16.035 |
| 153 | rs6984305 | A | T | 0.111 | -0.078 | 0.0025 | 1.00E-200 | 888187 | 188.173 |
| 154 | rs56731460 | A | G | 0.226 | 0.025 | 0.0019 | 3.70E-39 | 888151 | 59.961 |
| 155 | rs9694004 | T | C | 0.495 | 0.013 | 0.0016 | 6.89E-16 | 888164 | 32.580 |
| 156 | rs11986182 | T | A | 0.163 | 0.066 | 0.0022 | 1.00E-200 | 888074 | 252.413 |
| 157 | rs150799387 | A | G | 0.014 | -0.203 | 0.0070 | 2.47E-187 | 883406 | 22.698 |
| 158 | rs148754782 | A | G | 0.031 | 0.066 | 0.0047 | 4.19E-45 | 883552 | 12.044 |
| 159 | rs75772194 | G | A | 0.166 | -0.014 | 0.0021 | 1.09E-11 | 887196 | 12.782 |
| 160 | rs10958704 | G | A | 0.402 | -0.009 | 0.0016 | 7.94E-09 | 882441 | 16.006 |
| 161 | rs1949102 | G | A | 0.262 | 0.011 | 0.0018 | 4.87E-09 | 888191 | 13.241 |
| 162 | rs34246353 | C | T | 0.094 | -0.025 | 0.0027 | 3.19E-20 | 888183 | 14.442 |
| 163 | rs12155724 | T | A | 0.331 | 0.010 | 0.0017 | 1.21E-08 | 876687 | 14.380 |
| 164 | rs67638406 | A | G | 0.352 | 0.012 | 0.0017 | 4.43E-13 | 875612 | 23.925 |
| 165 | rs2293889 | T | G | 0.422 | -0.031 | 0.0016 | 9.04E-80 | 884272 | 174.519 |
| 166 | rs72647336 | A | G | 0.046 | -0.052 | 0.0041 | 3.78E-37 | 872040 | 14.116 |
| 167 | rs2954038 | C | A | 0.304 | -0.044 | 0.0017 | 8.16E-140 | 884620 | 268.208 |
| 168 | rs12549603 | A | G | 0.277 | -0.020 | 0.0018 | 6.91E-29 | 881863 | 49.827 |
| 169 | rs56925758 | A | G | 0.197 | 0.024 | 0.0020 | 3.78E-33 | 881857 | 45.523 |
| 170 | rs4741016 | C | T | 0.229 | -0.015 | 0.0019 | 2.11E-15 | 875666 | 22.232 |
| 171 | rs1086246 | G | A | 0.330 | -0.010 | 0.0017 | 7.65E-09 | 875738 | 14.753 |
| 172 | rs548824 | C | T | 0.163 | 0.015 | 0.0022 | 2.21E-11 | 888191 | 12.218 |
| 173 | rs686030 | C | A | 0.142 | -0.048 | 0.0023 | 1.55E-99 | 888076 | 109.293 |
| 174 | rs62543565 | C | A | 0.370 | -0.011 | 0.0017 | 1.57E-11 | 875740 | 21.188 |
| 175 | rs1412234 | C | T | 0.316 | -0.013 | 0.0017 | 2.92E-14 | 887230 | 24.982 |
| 176 | rs62544382 | G | T | 0.431 | -0.010 | 0.0017 | 3.28E-09 | 870011 | 17.173 |
| 177 | rs83921 | A | T | 0.384 | 0.010 | 0.0017 | 1.59E-09 | 884690 | 17.232 |
| 178 | rs2777802 | T | C | 0.230 | -0.031 | 0.0019 | 1.68E-61 | 888127 | 96.991 |
| 179 | rs3824477 | A | G | 0.033 | 0.105 | 0.0046 | 1.08E-117 | 882915 | 34.049 |
| 180 | rs62568179 | A | G | 0.122 | -0.075 | 0.0024 | 1.00E-200 | 887542 | 205.828 |
| 181 | rs2900177 | C | T | 0.299 | 0.010 | 0.0018 | 2.95E-08 | 884663 | 12.887 |
| 182 | rs4838074 | T | C | 0.297 | -0.012 | 0.0018 | 3.22E-11 | 887346 | 18.390 |
| 183 | rs7848507 | G | T | 0.365 | 0.011 | 0.0017 | 5.67E-10 | 874903 | 17.815 |
| 184 | rs2519093 | T | C | 0.188 | 0.016 | 0.0020 | 7.31E-16 | 887342 | 19.860 |
| 185 | rs6601924 | T | C | 0.157 | -0.014 | 0.0022 | 7.67E-10 | 884716 | 10.017 |
| 186 | rs7920002 | A | T | 0.416 | 0.014 | 0.0016 | 4.46E-18 | 854228 | 36.495 |
| 187 | rs12358424 | G | T | 0.089 | -0.027 | 0.0029 | 3.46E-21 | 887355 | 14.445 |
| 188 | rs61854123 | A | G | 0.241 | 0.026 | 0.0019 | 2.41E-44 | 878331 | 71.394 |
| 189 | rs10826337 | A | G | 0.420 | -0.011 | 0.0016 | 4.63E-12 | 872969 | 23.308 |
| 190 | rs10733794 | A | G | 0.328 | -0.010 | 0.0017 | 3.15E-08 | 878327 | 13.496 |
| 191 | rs11000759 | G | A | 0.423 | 0.009 | 0.0017 | 2.75E-08 | 871055 | 15.071 |
| 192 | rs1149709 | G | A | 0.404 | 0.009 | 0.0016 | 1.27E-08 | 885558 | 15.595 |
| 193 | rs1250530 | T | C | 0.304 | 0.013 | 0.0018 | 6.86E-14 | 865747 | 23.744 |
| 194 | rs4418728 | T | G | 0.452 | 0.020 | 0.0016 | 1.45E-35 | 876448 | 76.756 |
| 195 | rs1889930 | A | G | 0.201 | -0.016 | 0.0020 | 1.75E-16 | 887305 | 21.799 |
| 196 | rs2862954 | C | T | 0.474 | 0.016 | 0.0016 | 1.73E-22 | 887359 | 47.469 |
| 197 | rs2792751 | T | C | 0.284 | 0.029 | 0.0018 | 7.65E-62 | 887359 | 112.006 |
| 198 | rs17875416 | G | A | 0.115 | 0.030 | 0.0025 | 2.52E-34 | 886771 | 30.382 |
| 199 | rs2218584 | C | T | 0.422 | 0.012 | 0.0016 | 1.88E-14 | 884659 | 28.615 |
| 200 | rs2254069 | A | G | 0.116 | -0.018 | 0.0024 | 8.66E-13 | 887248 | 10.485 |
| 201 | rs2172071 | C | T | 0.316 | -0.012 | 0.0017 | 7.89E-12 | 874931 | 20.228 |
| 202 | rs10901852 | C | G | 0.261 | -0.011 | 0.0018 | 4.08E-10 | 887317 | 15.073 |
| 203 | rs1661052 | G | A | 0.092 | -0.025 | 0.0029 | 5.17E-18 | 870014 | 12.463 |
| 204 | rs34796300 | T | C | 0.441 | 0.010 | 0.0016 | 2.96E-10 | 879092 | 19.574 |
| 205 | rs3900595 | G | T | 0.128 | 0.022 | 0.0024 | 2.13E-19 | 887354 | 18.107 |
| 206 | rs10767659 | G | T | 0.326 | -0.015 | 0.0017 | 1.14E-17 | 888187 | 32.189 |
| 207 | rs12270749 | A | T | 0.312 | -0.011 | 0.0017 | 3.26E-10 | 888176 | 16.964 |
| 208 | rs11038700 | C | A | 0.277 | 0.012 | 0.0018 | 1.31E-11 | 888171 | 18.343 |
| 209 | rs10838684 | G | A | 0.314 | 0.045 | 0.0017 | 7.38E-144 | 888159 | 281.067 |
| 210 | rs7107356 | G | A | 0.492 | 0.011 | 0.0016 | 1.99E-12 | 885549 | 24.739 |
| 211 | rs515939 | A | G | 0.271 | -0.011 | 0.0018 | 2.27E-09 | 888096 | 14.117 |
| 212 | rs174545 | G | C | 0.347 | -0.041 | 0.0017 | 7.63E-131 | 887352 | 268.534 |
| 213 | rs11231694 | C | G | 0.057 | -0.042 | 0.0035 | 3.46E-33 | 886375 | 15.461 |
| 214 | rs2306363 | T | G | 0.199 | 0.022 | 0.0020 | 9.22E-27 | 857763 | 36.563 |
| 215 | rs7940105 | A | G | 0.273 | -0.013 | 0.0018 | 9.68E-12 | 882439 | 18.415 |
| 216 | rs673335 | C | T | 0.180 | -0.029 | 0.0021 | 3.98E-44 | 887330 | 57.312 |
| 217 | rs11216117 | A | C | 0.071 | -0.099 | 0.0031 | 1.00E-200 | 887346 | 133.274 |
| 218 | rs12721090 | T | C | 0.033 | 0.081 | 0.0045 | 2.62E-72 | 882430 | 20.822 |
| 219 | rs2364482 | G | T | 0.187 | 0.012 | 0.0021 | 4.62E-09 | 874579 | 10.442 |
| 220 | rs7298463 | C | G | 0.169 | -0.017 | 0.0022 | 2.50E-14 | 883405 | 16.317 |
| 221 | rs7134375 | A | C | 0.433 | 0.018 | 0.0016 | 2.47E-30 | 880814 | 64.331 |
| 222 | rs10842707 | T | C | 0.228 | -0.013 | 0.0019 | 3.47E-11 | 884158 | 15.452 |
| 223 | rs7132908 | A | G | 0.385 | -0.012 | 0.0016 | 1.93E-12 | 883960 | 23.467 |
| 224 | rs11170538 | C | T | 0.478 | -0.017 | 0.0019 | 5.23E-18 | 676815 | 37.326 |
| 225 | rs11171739 | C | T | 0.417 | 0.011 | 0.0016 | 1.04E-11 | 881532 | 22.492 |
| 226 | rs11172147 | A | G | 0.247 | 0.027 | 0.0019 | 1.75E-47 | 884156 | 77.945 |
| 227 | rs800648 | T | C | 0.362 | -0.010 | 0.0017 | 1.81E-09 | 884110 | 16.706 |
| 228 | rs2126606 | C | T | 0.379 | -0.011 | 0.0017 | 5.89E-10 | 866057 | 18.055 |
| 229 | rs10778120 | A | T | 0.336 | -0.010 | 0.0017 | 1.01E-08 | 862037 | 14.648 |
| 230 | rs7954144 | A | G | 0.470 | -0.028 | 0.0016 | 6.35E-70 | 883319 | 155.696 |
| 231 | rs11065979 | T | C | 0.427 | -0.018 | 0.0017 | 6.28E-28 | 862801 | 58.732 |
| 232 | rs2243616 | G | T | 0.352 | 0.012 | 0.0017 | 1.64E-12 | 853816 | 22.754 |
| 233 | rs111933537 | C | A | 0.088 | 0.028 | 0.0030 | 2.77E-20 | 845116 | 13.639 |
| 234 | rs1109560 | A | C | 0.094 | 0.046 | 0.0028 | 1.21E-63 | 883269 | 48.221 |
| 235 | rs57316347 | G | A | 0.312 | 0.022 | 0.0018 | 5.90E-36 | 883159 | 67.285 |
| 236 | rs837500 | C | T | 0.369 | -0.025 | 0.0018 | 1.60E-47 | 825445 | 97.663 |
| 237 | rs838876 | A | G | 0.332 | 0.039 | 0.0018 | 4.74E-110 | 858664 | 220.409 |
| 238 | rs61941677 | G | C | 0.130 | -0.060 | 0.0024 | 1.28E-131 | 877818 | 134.821 |
| 239 | rs549058 | T | G | 0.126 | 0.020 | 0.0024 | 3.65E-16 | 888186 | 14.629 |
| 240 | rs9537803 | C | T | 0.279 | -0.010 | 0.0018 | 5.14E-09 | 888173 | 13.734 |
| 241 | rs75130471 | A | G | 0.246 | -0.011 | 0.0019 | 2.09E-08 | 858702 | 11.651 |
| 242 | rs4129968 | G | A | 0.356 | -0.010 | 0.0017 | 2.80E-08 | 870843 | 14.142 |
| 243 | rs9604045 | T | G | 0.234 | 0.015 | 0.0022 | 5.27E-12 | 795462 | 17.059 |
| 244 | rs11624759 | A | C | 0.345 | 0.010 | 0.0017 | 3.41E-09 | 878354 | 15.789 |
| 245 | rs1955512 | G | A | 0.430 | -0.010 | 0.0017 | 1.24E-09 | 864186 | 18.089 |
| 246 | rs2185454 | G | T | 0.339 | -0.012 | 0.0017 | 1.50E-12 | 869671 | 22.428 |
| 247 | rs34511042 | A | G | 0.366 | -0.011 | 0.0017 | 6.95E-12 | 883037 | 21.831 |
| 248 | rs13379042 | C | T | 0.266 | 0.019 | 0.0018 | 9.53E-27 | 878703 | 44.760 |
| 249 | rs4904550 | G | A | 0.197 | -0.015 | 0.0020 | 2.93E-13 | 874729 | 16.848 |
| 250 | rs12434231 | C | T | 0.157 | -0.016 | 0.0022 | 2.20E-12 | 887204 | 13.049 |
| 251 | rs17577779 | T | C | 0.478 | -0.011 | 0.0017 | 3.28E-11 | 823931 | 21.959 |
| 252 | rs12888955 | G | A | 0.347 | -0.012 | 0.0017 | 9.61E-14 | 884702 | 25.127 |
| 253 | rs2494747 | G | T | 0.385 | 0.026 | 0.0018 | 2.17E-51 | 832632 | 107.710 |
| 254 | rs7497973 | G | A | 0.487 | -0.009 | 0.0016 | 5.56E-09 | 877002 | 16.979 |
| 255 | rs275182 | G | A | 0.170 | 0.016 | 0.0021 | 6.70E-14 | 887359 | 15.847 |
| 256 | rs3803357 | C | A | 0.499 | -0.011 | 0.0016 | 9.56E-12 | 883274 | 23.208 |
| 257 | rs1197674 | C | T | 0.357 | 0.010 | 0.0017 | 2.12E-08 | 871035 | 14.409 |
| 258 | rs55707100 | T | C | 0.027 | -0.100 | 0.0049 | 1.46E-90 | 883531 | 21.398 |
| 259 | rs11071371 | T | C | 0.129 | -0.070 | 0.0024 | 2.83E-187 | 887588 | 191.475 |
| 260 | rs145347194 | C | T | 0.087 | 0.093 | 0.0030 | 1.00E-200 | 876917 | 151.419 |
| 261 | rs17821316 | A | C | 0.485 | 0.068 | 0.0017 | 1.00E-200 | 850270 | 825.594 |
| 262 | rs1017547 | A | G | 0.470 | 0.013 | 0.0016 | 6.77E-15 | 888052 | 30.224 |
| 263 | rs2415142 | T | G | 0.438 | 0.010 | 0.0016 | 1.20E-10 | 875738 | 20.413 |
| 264 | rs4984511 | T | C | 0.269 | 0.012 | 0.0018 | 9.22E-11 | 887355 | 16.511 |
| 265 | rs1037117 | A | G | 0.252 | 0.011 | 0.0019 | 1.41E-09 | 858253 | 13.817 |
| 266 | rs7404696 | C | T | 0.275 | 0.016 | 0.0018 | 6.01E-18 | 835219 | 29.715 |
| 267 | rs2531995 | C | T | 0.381 | 0.010 | 0.0017 | 7.87E-09 | 866652 | 15.710 |
| 268 | rs9923623 | T | C | 0.335 | 0.013 | 0.0018 | 8.84E-13 | 849646 | 22.762 |
| 269 | rs11644601 | C | T | 0.299 | 0.018 | 0.0018 | 2.43E-23 | 875955 | 41.535 |
| 270 | rs11861132 | G | A | 0.403 | -0.011 | 0.0016 | 1.47E-10 | 876960 | 19.761 |
| 271 | rs3814883 | T | C | 0.464 | -0.012 | 0.0016 | 2.33E-12 | 872626 | 24.467 |
| 272 | rs77050717 | A | G | 0.015 | -0.207 | 0.0065 | 1.00E-200 | 879757 | 30.015 |
| 273 | rs72786781 | A | T | 0.026 | 0.171 | 0.0053 | 1.00E-200 | 876788 | 51.497 |
| 274 | rs12444708 | T | C | 0.125 | 0.077 | 0.0025 | 1.00E-200 | 879880 | 208.902 |
| 275 | rs7200805 | T | C | 0.027 | -0.121 | 0.0051 | 3.46E-125 | 871877 | 29.866 |
| 276 | rs72771479 | T | A | 0.017 | 0.183 | 0.0064 | 9.45E-177 | 878927 | 26.699 |
| 277 | rs16942887 | A | G | 0.124 | 0.073 | 0.0024 | 1.00E-200 | 888192 | 199.170 |
| 278 | rs12934512 | G | C | 0.268 | 0.011 | 0.0018 | 1.02E-09 | 888183 | 14.631 |
| 279 | rs4788481 | G | T | 0.288 | -0.012 | 0.0018 | 4.41E-11 | 882036 | 17.808 |
| 280 | rs2925979 | T | C | 0.301 | -0.033 | 0.0017 | 4.62E-83 | 881856 | 156.897 |
| 281 | rs72805157 | G | C | 0.120 | -0.020 | 0.0028 | 5.13E-13 | 847581 | 11.015 |
| 282 | rs12931143 | C | T | 0.469 | -0.012 | 0.0017 | 1.04E-12 | 849886 | 25.284 |
| 283 | rs3859027 | C | T | 0.392 | -0.010 | 0.0017 | 1.12E-08 | 865494 | 15.548 |
| 284 | rs11870735 | T | C | 0.175 | -0.015 | 0.0021 | 2.61E-12 | 887296 | 14.138 |
| 285 | rs17710668 | G | C | 0.192 | -0.012 | 0.0020 | 4.59E-09 | 882440 | 10.660 |
| 286 | rs3803800 | A | G | 0.220 | -0.018 | 0.0019 | 1.72E-21 | 887136 | 31.109 |
| 287 | rs1128162 | C | A | 0.446 | 0.010 | 0.0016 | 1.37E-09 | 887337 | 18.142 |
| 288 | rs881844 | C | G | 0.337 | -0.031 | 0.0017 | 6.56E-74 | 879808 | 147.829 |
| 289 | rs76868109 | C | A | 0.031 | -0.157 | 0.0051 | 1.00E-200 | 872871 | 56.087 |
| 290 | rs4375701 | T | C | 0.488 | 0.017 | 0.0016 | 8.05E-25 | 875744 | 52.885 |
| 291 | rs4794008 | T | C | 0.279 | 0.013 | 0.0019 | 3.73E-13 | 849739 | 21.235 |
| 292 | rs1292066 | A | T | 0.213 | -0.012 | 0.0020 | 1.35E-09 | 883960 | 12.318 |
| 293 | rs11656743 | G | A | 0.216 | -0.014 | 0.0020 | 4.10E-13 | 874924 | 17.814 |
| 294 | rs34931250 | T | C | 0.059 | -0.049 | 0.0035 | 1.67E-44 | 875252 | 21.645 |
| 295 | rs11656686 | T | C | 0.426 | 0.010 | 0.0017 | 1.21E-08 | 833257 | 15.884 |
| 296 | rs4969182 | T | C | 0.492 | -0.031 | 0.0016 | 6.17E-84 | 887346 | 188.395 |
| 297 | rs1652343 | C | T | 0.491 | 0.013 | 0.0016 | 1.39E-16 | 885551 | 34.154 |
| 298 | rs9956721 | T | A | 0.424 | 0.009 | 0.0016 | 4.03E-08 | 888131 | 14.719 |
| 299 | rs335519 | G | A | 0.411 | 0.009 | 0.0016 | 9.44E-09 | 888192 | 15.955 |
| 300 | rs62092076 | G | A | 0.261 | 0.011 | 0.0018 | 5.07E-10 | 887329 | 14.909 |
| 301 | rs80204526 | A | C | 0.010 | 0.277 | 0.0084 | 1.00E-200 | 878495 | 21.801 |
| 302 | rs4121823 | T | A | 0.160 | -0.069 | 0.0022 | 1.00E-200 | 887301 | 267.456 |
| 303 | rs523288 | T | A | 0.239 | -0.018 | 0.0019 | 6.18E-22 | 857870 | 33.710 |
| 304 | rs74625348 | C | G | 0.231 | 0.013 | 0.0019 | 3.48E-12 | 877098 | 17.194 |
| 305 | rs4804101 | T | G | 0.436 | -0.013 | 0.0016 | 2.24E-16 | 875762 | 33.140 |
| 306 | rs35137994 | T | C | 0.059 | 0.039 | 0.0034 | 6.23E-30 | 881875 | 14.366 |
| 307 | rs116843064 | A | G | 0.020 | 0.218 | 0.0057 | 1.00E-200 | 874691 | 57.210 |
| 308 | rs737337 | C | T | 0.087 | -0.052 | 0.0028 | 1.28E-77 | 887509 | 55.311 |
| 309 | rs6512256 | T | G | 0.217 | -0.012 | 0.0020 | 3.73E-09 | 868739 | 11.813 |
| 310 | rs4805881 | A | C | 0.334 | -0.020 | 0.0017 | 3.80E-31 | 879811 | 59.941 |
| 311 | rs6857 | T | C | 0.169 | -0.068 | 0.0022 | 1.00E-200 | 887462 | 282.069 |
| 312 | rs2288912 | G | C | 0.489 | 0.037 | 0.0016 | 5.78E-115 | 884935 | 259.639 |
| 313 | rs11879735 | T | A | 0.113 | -0.019 | 0.0025 | 1.35E-14 | 888170 | 11.888 |
| 314 | rs12462758 | T | C | 0.229 | -0.015 | 0.0019 | 2.36E-14 | 888141 | 20.555 |
| 315 | rs103294 | T | C | 0.213 | 0.057 | 0.0020 | 8.98E-189 | 886067 | 288.009 |
| 316 | rs2325976 | T | C | 0.364 | 0.010 | 0.0017 | 1.02E-09 | 882694 | 17.268 |
| 317 | rs13734 | A | G | 0.181 | -0.016 | 0.0021 | 5.28E-14 | 888029 | 16.788 |
| 318 | rs112200607 | A | G | 0.162 | 0.016 | 0.0022 | 6.11E-13 | 887356 | 14.067 |
| 319 | rs6088461 | T | G | 0.425 | -0.019 | 0.0017 | 7.39E-30 | 874759 | 62.970 |
| 320 | rs1800961 | T | C | 0.035 | -0.131 | 0.0044 | 4.47E-197 | 879998 | 60.094 |
| 321 | rs77617917 | A | G | 0.076 | -0.054 | 0.0030 | 1.91E-73 | 887172 | 46.213 |
| 322 | rs6066371 | A | T | 0.332 | -0.015 | 0.0021 | 8.85E-13 | 665561 | 22.659 |
| 323 | rs11905856 | G | A | 0.187 | 0.017 | 0.0021 | 6.17E-15 | 864439 | 18.501 |
| 324 | rs8126001 | T | C | 0.482 | 0.014 | 0.0018 | 1.54E-14 | 687231 | 29.489 |
| 325 | rs2229741 | T | C | 0.422 | -0.009 | 0.0016 | 2.11E-08 | 885562 | 15.313 |
| 326 | rs2254038 | T | C | 0.411 | -0.011 | 0.0017 | 6.60E-11 | 875708 | 20.642 |
| 327 | rs4818226 | A | G | 0.326 | 0.013 | 0.0017 | 5.39E-14 | 877547 | 24.866 |
| 328 | rs8130925 | T | G | 0.496 | 0.009 | 0.0016 | 6.01E-09 | 882440 | 16.915 |
| 329 | rs235374 | C | G | 0.431 | -0.019 | 0.0016 | 4.75E-31 | 870011 | 65.865 |
| 330 | rs9976784 | A | G | 0.202 | -0.018 | 0.0020 | 3.77E-20 | 878878 | 27.255 |
| 331 | rs2070512 | C | A | 0.210 | -0.035 | 0.0020 | 1.54E-71 | 881850 | 106.146 |
| 332 | rs9608668 | C | T | 0.260 | -0.010 | 0.0019 | 4.91E-08 | 877544 | 11.449 |
| 333 | rs9608955 | T | C | 0.226 | -0.017 | 0.0019 | 2.26E-19 | 887351 | 28.337 |
| 334 | rs2899297 | G | A | 0.401 | 0.020 | 0.0016 | 6.36E-33 | 877425 | 68.626 |
| 335 | rs2294927 | C | T | 0.392 | -0.011 | 0.0016 | 9.21E-11 | 881804 | 20.013 |

**Supplemental Table 5 Instrumental variables for predicting**

**non** **high-density lipoprotein cholesterol**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **SNP** | **A1** | **A2** | **EAF** | **Beta** | **SE** | **P value** | **Sample**  **size** | **F statistic** |
| 1 | rs7541095 | T | C | 0.46 | -0.027 | 0.0021 | 1.20E-39 | 567653 | 86.263 |
| 2 | rs4532825 | C | G | 0.309 | -0.018 | 0.0022 | 4.44E-15 | 560448 | 26.262 |
| 3 | rs114165349 | C | G | 0.024 | 0.096 | 0.0065 | 2.28E-50 | 565258 | 10.35 |
| 4 | rs213499 | C | A | 0.462 | -0.015 | 0.002 | 3.11E-13 | 570272 | 26.416 |
| 5 | rs11591147 | T | G | 0.016 | -0.417 | 0.0081 | 1.00E-200 | 557951 | 80.076 |
| 6 | rs693668 | G | A | 0.367 | -0.056 | 0.0022 | 2.65E-147 | 549253 | 310.565 |
| 7 | rs11206517 | G | T | 0.041 | 0.08 | 0.0052 | 4.30E-53 | 565623 | 18.37 |
| 8 | rs7534572 | C | G | 0.334 | -0.065 | 0.0023 | 1.06E-177 | 527119 | 359.644 |
| 9 | rs4847181 | C | G | 0.208 | -0.026 | 0.0026 | 4.74E-24 | 560474 | 33.711 |
| 10 | rs12746961 | T | C | 0.088 | -0.117 | 0.0036 | 1.00E-200 | 570072 | 166.584 |
| 11 | rs604349 | A | G | 0.098 | -0.094 | 0.0035 | 1.07E-155 | 557680 | 124.503 |
| 12 | rs1910485 | A | G | 0.275 | -0.013 | 0.0023 | 2.06E-08 | 570281 | 12.537 |
| 13 | rs267733 | G | A | 0.152 | -0.023 | 0.0028 | 5.81E-16 | 569294 | 16.886 |
| 14 | rs11589479 | A | G | 0.15 | -0.018 | 0.0029 | 3.26E-10 | 563948 | 10.076 |
| 15 | rs1793292 | T | C | 0.238 | 0.014 | 0.0025 | 6.47E-09 | 560471 | 12.22 |
| 16 | rs1779823 | T | G | 0.316 | 0.017 | 0.0022 | 2.65E-14 | 569437 | 25.065 |
| 17 | rs10911265 | C | T | 0.446 | -0.013 | 0.0021 | 6.09E-10 | 552095 | 18.923 |
| 18 | rs12048743 | G | C | 0.453 | 0.013 | 0.0021 | 3.14E-10 | 564772 | 19.618 |
| 19 | rs11118320 | C | G | 0.429 | -0.012 | 0.0021 | 1.79E-09 | 570118 | 17.733 |
| 20 | rs2642438 | A | G | 0.293 | -0.019 | 0.0023 | 5.72E-17 | 557014 | 29.032 |
| 21 | rs2281719 | C | T | 0.389 | 0.018 | 0.0021 | 8.54E-18 | 569428 | 35.095 |
| 22 | rs2587534 | G | A | 0.47 | -0.04 | 0.0021 | 9.19E-84 | 556878 | 187.392 |
| 23 | rs4075673 | T | C | 0.445 | 0.065 | 0.0021 | 1.00E-200 | 570220 | 496.5 |
| 24 | rs312051 | C | G | 0.159 | -0.077 | 0.0028 | 2.56E-169 | 570277 | 205.813 |
| 25 | rs780105 | G | A | 0.463 | -0.029 | 0.0021 | 8.49E-46 | 570284 | 100.361 |
| 26 | rs4332966 | T | G | 0.246 | -0.014 | 0.0024 | 1.32E-08 | 567606 | 11.981 |
| 27 | rs2374569 | T | C | 0.381 | -0.012 | 0.0021 | 5.79E-09 | 570283 | 15.991 |
| 28 | rs185263492 | A | T | 0.162 | 0.037 | 0.0031 | 9.38E-33 | 471890 | 38.577 |
| 29 | rs4299376 | G | T | 0.294 | 0.071 | 0.0023 | 1.00E-200 | 553571 | 403.694 |
| 30 | rs6709904 | G | A | 0.105 | -0.046 | 0.0033 | 3.47E-45 | 569701 | 37.402 |
| 31 | rs2710642 | G | A | 0.334 | -0.024 | 0.0022 | 1.67E-28 | 559627 | 54.565 |
| 32 | rs2970901 | T | G | 0.47 | 0.013 | 0.002 | 5.84E-11 | 570249 | 21.361 |
| 33 | rs7602390 | G | A | 0.343 | -0.012 | 0.0021 | 1.70E-08 | 570283 | 14.339 |
| 34 | rs2465956 | C | T | 0.2 | 0.02 | 0.0026 | 1.62E-14 | 570279 | 18.865 |
| 35 | rs72839616 | G | T | 0.09 | -0.043 | 0.0036 | 8.83E-34 | 570203 | 24.138 |
| 36 | rs17050272 | A | G | 0.427 | -0.021 | 0.0022 | 5.31E-22 | 542154 | 45.497 |
| 37 | rs1375131 | C | T | 0.302 | 0.017 | 0.0027 | 1.52E-10 | 472053 | 17.288 |
| 38 | rs10184004 | T | C | 0.418 | -0.019 | 0.0021 | 3.35E-20 | 570193 | 41.247 |
| 39 | rs66491446 | G | A | 0.403 | 0.021 | 0.0021 | 1.36E-23 | 560284 | 48.231 |
| 40 | rs10497868 | C | T | 0.344 | -0.012 | 0.0022 | 3.34E-08 | 569446 | 13.767 |
| 41 | rs10932008 | G | A | 0.184 | -0.028 | 0.0028 | 1.93E-23 | 527883 | 29.889 |
| 42 | rs1250259 | T | A | 0.272 | -0.017 | 0.0023 | 4.17E-14 | 569450 | 22.609 |
| 43 | rs887829 | T | C | 0.327 | -0.018 | 0.0022 | 2.04E-17 | 569413 | 31.74 |
| 44 | rs1151996 | C | A | 0.372 | -0.026 | 0.0021 | 5.42E-34 | 570281 | 69.034 |
| 45 | rs6792725 | A | G | 0.331 | 0.022 | 0.0023 | 1.79E-22 | 545359 | 42.132 |
| 46 | rs9837622 | A | T | 0.071 | -0.039 | 0.004 | 2.59E-22 | 570275 | 12.388 |
| 47 | rs71311871 | G | A | 0.078 | -0.039 | 0.0037 | 3.20E-25 | 570280 | 15.466 |
| 48 | rs55921103 | G | T | 0.364 | -0.014 | 0.0022 | 6.03E-11 | 554446 | 19.822 |
| 49 | rs12054451 | G | T | 0.253 | 0.017 | 0.0023 | 1.71E-13 | 570280 | 20.528 |
| 50 | rs9883745 | A | G | 0.335 | 0.019 | 0.0022 | 2.47E-18 | 567345 | 33.987 |
| 51 | rs1291921 | A | G | 0.26 | -0.019 | 0.0024 | 6.41E-16 | 553135 | 25.131 |
| 52 | rs439765 | T | A | 0.246 | 0.016 | 0.0024 | 9.27E-12 | 567310 | 17.242 |
| 53 | rs1377587 | A | G | 0.449 | 0.013 | 0.0022 | 9.29E-10 | 522035 | 18.54 |
| 54 | rs13108218 | A | G | 0.383 | 0.027 | 0.0022 | 1.09E-34 | 551512 | 71.339 |
| 55 | rs16878007 | G | A | 0.42 | -0.012 | 0.0021 | 2.11E-08 | 563899 | 15.295 |
| 56 | rs34707604 | C | T | 0.232 | 0.032 | 0.0028 | 8.23E-32 | 519919 | 49.095 |
| 57 | rs9994887 | G | A | 0.469 | 0.018 | 0.0024 | 6.72E-14 | 517290 | 27.967 |
| 58 | rs3775228 | T | C | 0.392 | 0.019 | 0.0021 | 1.70E-19 | 560475 | 38.879 |
| 59 | rs28431971 | A | G | 0.244 | -0.016 | 0.0024 | 5.80E-12 | 570283 | 17.487 |
| 60 | rs793899 | C | T | 0.404 | 0.012 | 0.0021 | 1.77E-08 | 566680 | 15.281 |
| 61 | rs9687832 | A | G | 0.185 | 0.023 | 0.0026 | 1.63E-19 | 570237 | 24.62 |
| 62 | rs37520 | G | A | 0.324 | 0.014 | 0.0022 | 5.20E-10 | 570283 | 16.909 |
| 63 | rs3010279 | A | G | 0.214 | -0.019 | 0.0025 | 6.98E-15 | 570244 | 20.388 |
| 64 | rs1423527 | A | C | 0.398 | 0.066 | 0.0021 | 1.00E-200 | 567653 | 472.771 |
| 65 | rs6869845 | C | T | 0.455 | -0.015 | 0.0021 | 2.50E-13 | 569229 | 26.568 |
| 66 | rs6874202 | T | C | 0.362 | -0.044 | 0.0021 | 3.34E-96 | 566785 | 200.152 |
| 67 | rs13360569 | T | C | 0.421 | -0.013 | 0.0021 | 1.66E-10 | 559532 | 19.907 |
| 68 | rs3733873 | C | T | 0.176 | -0.017 | 0.0027 | 1.54E-10 | 569374 | 11.887 |
| 69 | rs2235215 | C | T | 0.332 | -0.031 | 0.0022 | 3.84E-47 | 569410 | 92.252 |
| 70 | rs80215559 | C | T | 0.061 | -0.048 | 0.0043 | 2.14E-28 | 563898 | 13.994 |
| 71 | rs7758790 | C | T | 0.219 | 0.018 | 0.0027 | 8.06E-12 | 500077 | 15.993 |
| 72 | rs6689 | G | A | 0.205 | 0.055 | 0.0029 | 2.69E-82 | 552120 | 120.391 |
| 73 | rs7748777 | A | G | 0.447 | -0.012 | 0.0021 | 1.04E-08 | 560277 | 16.195 |
| 74 | rs4711750 | A | T | 0.487 | 0.023 | 0.0021 | 2.35E-27 | 542457 | 58.663 |
| 75 | rs2396084 | A | G | 0.305 | -0.016 | 0.0023 | 4.04E-13 | 551750 | 22.312 |
| 76 | rs2143830 | G | A | 0.49 | -0.014 | 0.0021 | 1.04E-11 | 557835 | 23.115 |
| 77 | rs17789218 | C | T | 0.22 | -0.02 | 0.0024 | 8.84E-17 | 570284 | 23.755 |
| 78 | rs10456852 | T | C | 0.124 | -0.023 | 0.0031 | 2.21E-13 | 570285 | 11.689 |
| 79 | rs1544155 | A | C | 0.395 | -0.017 | 0.0021 | 1.58E-15 | 570257 | 30.366 |
| 80 | rs141783576 | C | G | 0.071 | 0.043 | 0.0047 | 1.12E-19 | 459376 | 10.84 |
| 81 | rs9399137 | C | T | 0.269 | -0.023 | 0.0023 | 1.34E-24 | 569392 | 41.226 |
| 82 | rs636202 | T | C | 0.49 | 0.017 | 0.0021 | 2.30E-16 | 564729 | 33.654 |
| 83 | rs12208357 | T | C | 0.066 | 0.071 | 0.004 | 6.40E-70 | 570278 | 38.306 |
| 84 | rs117733303 | G | A | 0.016 | 0.143 | 0.0081 | 1.76E-70 | 564714 | 10.103 |
| 85 | rs10455872 | G | A | 0.062 | 0.111 | 0.0042 | 2.52E-150 | 567724 | 79.807 |
| 86 | rs7778968 | C | G | 0.233 | -0.016 | 0.0024 | 2.87E-11 | 565364 | 15.822 |
| 87 | rs55649657 | G | C | 0.207 | 0.043 | 0.0025 | 6.36E-67 | 569419 | 98.077 |
| 88 | rs896311 | G | A | 0.305 | -0.014 | 0.0022 | 4.74E-10 | 559601 | 16.442 |
| 89 | rs12540878 | G | C | 0.194 | 0.018 | 0.0026 | 7.71E-12 | 564533 | 14.648 |
| 90 | rs1122291 | T | C | 0.248 | 0.014 | 0.0024 | 3.30E-09 | 563960 | 13.055 |
| 91 | rs17725246 | C | T | 0.205 | 0.048 | 0.0026 | 2.70E-79 | 560737 | 115.896 |
| 92 | rs6720 | T | C | 0.304 | 0.014 | 0.0022 | 5.85E-10 | 570283 | 16.237 |
| 93 | rs6967728 | A | G | 0.183 | -0.019 | 0.0027 | 5.57E-13 | 557813 | 15.547 |
| 94 | rs221796 | C | G | 0.114 | 0.028 | 0.0032 | 6.72E-18 | 560399 | 15.009 |
| 95 | rs12154627 | T | C | 0.498 | 0.016 | 0.0021 | 1.44E-14 | 557755 | 29.588 |
| 96 | rs11980656 | T | G | 0.274 | -0.014 | 0.0024 | 4.59E-09 | 552344 | 13.669 |
| 97 | rs11761517 | T | C | 0.461 | -0.013 | 0.0022 | 2.74E-09 | 528450 | 17.574 |
| 98 | rs9987289 | A | G | 0.093 | -0.053 | 0.0035 | 9.70E-53 | 570282 | 39.452 |
| 99 | rs2047252 | T | C | 0.108 | 0.03 | 0.0033 | 2.84E-19 | 557817 | 15.519 |
| 100 | rs115849089 | A | G | 0.109 | -0.065 | 0.0033 | 1.53E-87 | 570250 | 76.416 |
| 101 | rs2309233 | T | C | 0.262 | -0.015 | 0.0024 | 8.65E-10 | 551112 | 14.544 |
| 102 | rs10097401 | A | G | 0.195 | 0.031 | 0.0026 | 4.69E-33 | 569451 | 45.039 |
| 103 | rs9297994 | G | A | 0.339 | 0.037 | 0.0022 | 1.65E-66 | 569339 | 133.039 |
| 104 | rs6992869 | C | T | 0.37 | 0.012 | 0.0021 | 1.94E-08 | 567652 | 14.71 |
| 105 | rs12548461 | G | C | 0.322 | -0.017 | 0.0022 | 4.11E-15 | 570229 | 26.918 |
| 106 | rs10955258 | T | C | 0.253 | -0.013 | 0.0023 | 4.91E-08 | 570283 | 11.246 |
| 107 | rs2737246 | C | G | 0.277 | -0.029 | 0.0023 | 3.05E-37 | 570227 | 65.138 |
| 108 | rs6999569 | G | A | 0.475 | -0.073 | 0.0021 | 1.00E-200 | 554574 | 618.856 |
| 109 | rs3887251 | C | A | 0.209 | 0.016 | 0.0025 | 7.16E-11 | 566730 | 14.044 |
| 110 | rs1134030 | T | C | 0.353 | 0.024 | 0.0022 | 7.34E-29 | 557256 | 56.772 |
| 111 | rs10810657 | T | A | 0.405 | 0.016 | 0.0021 | 8.83E-15 | 557753 | 28.986 |
| 112 | rs60277997 | T | C | 0.358 | -0.014 | 0.0022 | 8.47E-11 | 539876 | 19.374 |
| 113 | rs1537182 | A | G | 0.455 | 0.017 | 0.002 | 2.63E-16 | 570260 | 33.263 |
| 114 | rs2740488 | C | A | 0.256 | -0.031 | 0.0023 | 2.99E-39 | 569639 | 65.452 |
| 115 | rs1249725 | G | T | 0.436 | -0.012 | 0.0021 | 8.96E-09 | 555558 | 16.257 |
| 116 | rs507666 | A | G | 0.183 | 0.067 | 0.0026 | 3.73E-148 | 569435 | 201.003 |
| 117 | rs3812591 | C | T | 0.263 | -0.013 | 0.0023 | 8.52E-09 | 556410 | 12.853 |
| 118 | rs7903402 | T | C | 0.41 | 0.016 | 0.0021 | 9.98E-14 | 559474 | 26.79 |
| 119 | rs11239550 | G | A | 0.31 | 0.012 | 0.0022 | 4.00E-08 | 570215 | 12.899 |
| 120 | rs9633739 | A | G | 0.454 | -0.013 | 0.0021 | 9.96E-10 | 559597 | 18.509 |
| 121 | rs2068888 | A | G | 0.45 | -0.024 | 0.0021 | 1.69E-30 | 558542 | 65.23 |
| 122 | rs12781812 | T | G | 0.371 | 0.013 | 0.0021 | 3.66E-10 | 569450 | 18.336 |
| 123 | rs2803621 | G | A | 0.283 | 0.013 | 0.0022 | 1.11E-08 | 569432 | 13.247 |
| 124 | rs7910135 | C | A | 0.468 | -0.018 | 0.002 | 1.98E-19 | 566760 | 40.466 |
| 125 | rs2994807 | A | G | 0.445 | -0.022 | 0.0021 | 6.61E-26 | 566778 | 54.726 |
| 126 | rs11601507 | A | C | 0.07 | 0.038 | 0.004 | 4.33E-22 | 568709 | 12.077 |
| 127 | rs10832954 | G | A | 0.286 | -0.024 | 0.0023 | 1.16E-26 | 566821 | 46.659 |
| 128 | rs4506602 | C | T | 0.475 | -0.012 | 0.0021 | 2.57E-08 | 567551 | 15.466 |
| 129 | rs174537 | T | G | 0.354 | -0.032 | 0.0021 | 1.41E-49 | 569412 | 100.236 |
| 130 | rs7350481 | T | C | 0.069 | 0.138 | 0.004 | 1.00E-200 | 569426 | 152.246 |
| 131 | rs12280753 | T | C | 0.071 | 0.113 | 0.0039 | 1.26E-183 | 569453 | 110.474 |
| 132 | rs11220459 | C | G | 0.133 | 0.042 | 0.0029 | 2.90E-46 | 569425 | 47.034 |
| 133 | rs35882350 | G | A | 0.249 | 0.025 | 0.0025 | 7.91E-24 | 544343 | 37.888 |
| 134 | rs17389465 | A | T | 0.067 | -0.041 | 0.004 | 1.18E-24 | 568854 | 13.209 |
| 135 | rs1035606 | T | C | 0.295 | -0.015 | 0.0022 | 5.48E-11 | 570278 | 17.885 |
| 136 | rs7306330 | A | T | 0.416 | 0.016 | 0.0022 | 2.06E-13 | 552927 | 26.213 |
| 137 | rs12313762 | T | C | 0.257 | -0.023 | 0.0024 | 2.00E-20 | 540790 | 32.765 |
| 138 | rs7955221 | C | A | 0.451 | -0.014 | 0.0021 | 4.01E-11 | 556958 | 21.596 |
| 139 | rs653178 | C | T | 0.461 | -0.021 | 0.0021 | 1.25E-24 | 569453 | 52.161 |
| 140 | rs1169288 | C | A | 0.325 | 0.032 | 0.0022 | 9.87E-48 | 569237 | 92.441 |
| 141 | rs11057397 | T | C | 0.334 | -0.018 | 0.0022 | 3.17E-16 | 569413 | 29.673 |
| 142 | rs11057841 | T | C | 0.139 | 0.031 | 0.0029 | 1.14E-26 | 562086 | 27.35 |
| 143 | rs7998275 | C | G | 0.4 | -0.014 | 0.0022 | 2.37E-10 | 548231 | 19.267 |
| 144 | rs7328654 | G | A | 0.469 | 0.022 | 0.002 | 1.14E-26 | 567650 | 56.915 |
| 145 | rs4942837 | T | G | 0.48 | 0.013 | 0.0023 | 8.65E-09 | 461938 | 16.536 |
| 146 | rs7336371 | A | G | 0.219 | 0.016 | 0.0024 | 2.89E-11 | 570197 | 15.137 |
| 147 | rs551473284 | T | C | 0.367 | -0.018 | 0.0028 | 2.67E-10 | 296041 | 18.542 |
| 148 | rs6602909 | C | T | 0.33 | 0.025 | 0.0023 | 4.54E-28 | 531533 | 53.36 |
| 149 | rs12016920 | C | T | 0.188 | -0.023 | 0.0027 | 1.82E-17 | 557088 | 22.083 |
| 150 | rs2332328 | T | C | 0.471 | 0.022 | 0.0021 | 5.01E-25 | 546089 | 53.208 |
| 151 | rs10133108 | A | G | 0.458 | -0.011 | 0.0021 | 3.42E-08 | 557789 | 15.121 |
| 152 | rs12878001 | G | T | 0.158 | 0.019 | 0.0028 | 9.77E-12 | 569222 | 12.339 |
| 153 | rs10131943 | G | T | 0.245 | -0.02 | 0.0024 | 4.46E-17 | 569452 | 26.105 |
| 154 | rs13379042 | C | T | 0.257 | -0.017 | 0.0023 | 1.02E-12 | 560796 | 19.401 |
| 155 | rs722599 | C | T | 0.395 | 0.013 | 0.0021 | 1.69E-10 | 569452 | 19.496 |
| 156 | rs17776811 | A | C | 0.41 | 0.012 | 0.0021 | 7.70E-09 | 564533 | 16.135 |
| 157 | rs12905477 | T | C | 0.358 | -0.017 | 0.0022 | 7.20E-15 | 557845 | 27.831 |
| 158 | rs72749502 | T | A | 0.07 | 0.039 | 0.004 | 3.70E-22 | 570270 | 12.149 |
| 159 | rs261338 | A | G | 0.161 | 0.018 | 0.0028 | 1.95E-10 | 557668 | 10.945 |
| 160 | rs62011285 | C | T | 0.353 | 0.017 | 0.0021 | 3.82E-15 | 567560 | 28.226 |
| 161 | rs4776342 | G | A | 0.208 | 0.015 | 0.0025 | 3.84E-09 | 569701 | 11.433 |
| 162 | rs11638576 | A | G | 0.401 | 0.013 | 0.0022 | 1.62E-09 | 552927 | 17.478 |
| 163 | rs8043389 | G | T | 0.348 | -0.013 | 0.0022 | 2.61E-09 | 561320 | 16.091 |
| 164 | rs73530203 | A | G | 0.376 | 0.015 | 0.0021 | 2.22E-12 | 566768 | 23.125 |
| 165 | rs11647975 | G | T | 0.237 | -0.013 | 0.0024 | 4.22E-08 | 550062 | 10.866 |
| 166 | rs1561139 | T | G | 0.405 | -0.013 | 0.0021 | 2.45E-10 | 569440 | 19.311 |
| 167 | rs3764261 | A | C | 0.32 | -0.056 | 0.0022 | 1.91E-146 | 564044 | 289.169 |
| 168 | rs7206039 | A | C | 0.385 | 0.015 | 0.0022 | 5.38E-12 | 530367 | 22.516 |
| 169 | rs12924886 | T | A | 0.188 | 0.058 | 0.0026 | 4.93E-112 | 566671 | 154.501 |
| 170 | rs7202323 | G | T | 0.224 | -0.027 | 0.0025 | 3.31E-28 | 566705 | 42.167 |
| 171 | rs67890964 | C | T | 0.389 | -0.018 | 0.0023 | 4.88E-15 | 535827 | 29.144 |
| 172 | rs55714927 | T | C | 0.189 | -0.036 | 0.0027 | 1.77E-40 | 549583 | 54.395 |
| 173 | rs1642762 | C | T | 0.44 | 0.015 | 0.0021 | 7.66E-13 | 557750 | 25.314 |
| 174 | rs34717629 | A | G | 0.193 | -0.016 | 0.0028 | 1.30E-08 | 547171 | 10.07 |
| 175 | rs8076441 | T | C | 0.307 | -0.02 | 0.0023 | 1.11E-18 | 554945 | 33.131 |
| 176 | rs62075782 | C | G | 0.232 | -0.017 | 0.0026 | 2.67E-11 | 544584 | 15.825 |
| 177 | rs9897063 | A | G | 0.467 | -0.026 | 0.0024 | 1.82E-27 | 458690 | 58.703 |
| 178 | rs9896627 | T | C | 0.247 | -0.016 | 0.0024 | 9.83E-12 | 557789 | 17.246 |
| 179 | rs763333 | C | G | 0.498 | 0.017 | 0.0021 | 1.41E-16 | 556997 | 34.145 |
| 180 | rs34931250 | T | C | 0.061 | 0.046 | 0.0044 | 4.16E-25 | 557346 | 12.292 |
| 181 | rs72631343 | G | C | 0.129 | -0.036 | 0.0031 | 1.18E-32 | 569359 | 31.824 |
| 182 | rs9900122 | C | T | 0.306 | -0.016 | 0.0022 | 1.98E-12 | 561903 | 21.026 |
| 183 | rs11659469 | A | G | 0.351 | -0.018 | 0.0021 | 1.76E-16 | 569241 | 30.918 |
| 184 | rs12454507 | G | A | 0.286 | 0.014 | 0.0024 | 2.52E-09 | 440168 | 14.51 |
| 185 | rs10423733 | C | T | 0.157 | -0.12 | 0.0028 | 1.00E-200 | 569641 | 493.007 |
| 186 | rs35878749 | A | G | 0.366 | -0.042 | 0.0021 | 3.85E-87 | 559372 | 181.762 |
| 187 | rs4804149 | C | T | 0.289 | 0.032 | 0.0025 | 7.89E-39 | 519294 | 69.82 |
| 188 | rs440677 | G | A | 0.385 | 0.021 | 0.0021 | 1.22E-22 | 562151 | 45.406 |
| 189 | rs72999033 | T | C | 0.064 | -0.136 | 0.0041 | 1.00E-200 | 570193 | 129.185 |
| 190 | rs2604894 | A | G | 0.448 | -0.012 | 0.0021 | 1.15E-08 | 552926 | 16.108 |
| 191 | rs1551891 | A | G | 0.076 | -0.142 | 0.0038 | 1.00E-200 | 569532 | 195.025 |
| 192 | rs10406338 | C | T | 0.345 | 0.081 | 0.0021 | 1.00E-200 | 570234 | 657.305 |
| 193 | rs3826846 | G | A | 0.353 | -0.014 | 0.0023 | 2.63E-09 | 522292 | 16.19 |
| 194 | rs34503352 | A | G | 0.164 | -0.032 | 0.0028 | 5.77E-31 | 570284 | 36.716 |
| 195 | rs3794966 | T | C | 0.185 | 0.015 | 0.0026 | 7.04E-09 | 559873 | 10.109 |
| 196 | rs6085202 | A | G | 0.439 | 0.014 | 0.0021 | 2.46E-12 | 567069 | 24.174 |
| 197 | rs969075 | T | C | 0.334 | -0.013 | 0.0022 | 1.41E-09 | 557846 | 16.309 |
| 198 | rs2618566 | G | T | 0.335 | 0.036 | 0.0022 | 1.11E-59 | 540080 | 118.297 |
| 199 | rs2424699 | A | G | 0.425 | 0.012 | 0.0021 | 2.12E-08 | 556842 | 15.337 |
| 200 | rs224419 | G | A | 0.223 | -0.026 | 0.0025 | 3.23E-25 | 569431 | 37.303 |
| 201 | rs1883711 | C | G | 0.034 | 0.136 | 0.0057 | 6.88E-126 | 557968 | 37.205 |
| 202 | rs6093446 | A | G | 0.263 | 0.031 | 0.0023 | 7.58E-42 | 569439 | 71.219 |
| 203 | rs389877 | G | C | 0.194 | -0.018 | 0.0027 | 3.58E-11 | 527333 | 13.707 |
| 204 | rs6019558 | A | C | 0.315 | 0.014 | 0.0022 | 1.02E-09 | 559643 | 16.092 |
| 205 | rs8121509 | C | T | 0.451 | -0.018 | 0.0023 | 4.39E-15 | 409419 | 30.465 |
| 206 | rs7279497 | T | C | 0.449 | 0.013 | 0.0021 | 6.68E-10 | 569433 | 18.858 |
| 207 | rs2413338 | C | T | 0.387 | 0.016 | 0.0021 | 3.39E-14 | 566726 | 27.279 |
| 208 | rs5758153 | T | G | 0.344 | 0.012 | 0.0022 | 3.77E-08 | 559523 | 13.658 |
| 209 | rs738408 | T | C | 0.228 | -0.021 | 0.0024 | 1.86E-18 | 569364 | 27.048 |

**Supplemental Table 6 Instrumental variables for predicting**

**HMGCR-mediated total cholesterol**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **SNP** | **A1** | **A2** | **EAF** | **Beta** | **SE** | **P value** | **Sample**  **size** | **F statistic** |
| 1 | rs74744717 | A | G | 0.125 | 0.058 | 0.0024 | 7.94E-128 | 930527 | 126.564 |
| 2 | rs2006760 | G | C | 0.202 | 0.043 | 0.0020 | 7.29E-102 | 930637 | 148.056 |
| 3 | rs2112653 | C | T | 0.439 | 0.059 | 0.0016 | 1.00E-200 | 917997 | 642.446 |
| 4 | rs111860654 | A | G | 0.060 | 0.050 | 0.0033 | 4.07E-51 | 930562 | 25.473 |
| 5 | rs4703665 | T | C | 0.130 | -0.035 | 0.0027 | 4.28E-37 | 840487 | 36.631 |
| 6 | rs35122945 | C | A | 0.067 | -0.037 | 0.0034 | 7.47E-27 | 923310 | 14.390 |
| 7 | rs17238568 | T | G | 0.066 | 0.041 | 0.0032 | 5.24E-38 | 930616 | 20.335 |
| 8 | rs3761739 | T | C | 0.152 | 0.042 | 0.0022 | 4.26E-85 | 930621 | 98.522 |
| 9 | rs10473972 | G | T | 0.249 | 0.057 | 0.0018 | 1.00E-200 | 930634 | 365.408 |
| 10 | rs7733436 | T | C | 0.384 | 0.062 | 0.0016 | 1.00E-200 | 930630 | 704.162 |
| 11 | rs80324692 | T | C | 0.068 | -0.042 | 0.0035 | 1.02E-32 | 901947 | 18.036 |
| 12 | rs12659791 | C | T | 0.153 | 0.041 | 0.0022 | 5.26E-80 | 930636 | 92.991 |

**Supplemental Table 7 Instrumental variables for predicting**

**HMGCR-mediated low-density lipoprotein cholesterol**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **No.** | **SNP** | **A1** | **A2** | **EAF** | **Beta** | **SE** | **P value** | **Sample**  **size** | **F statistic** |
| 1 | rs74744717 | A | G | 0.125 | 0.063 | 0.0025 | 5.37E-137 | 842523 | 135.791 |
| 2 | rs2006760 | G | C | 0.203 | 0.048 | 0.0021 | 2.28E-115 | 842632 | 168.696 |
| 3 | rs2112653 | C | T | 0.441 | 0.063 | 0.0017 | 1.00E-200 | 828375 | 662.352 |
| 4 | rs4703665 | T | C | 0.130 | -0.034 | 0.0029 | 4.17E-32 | 777136 | 31.468 |
| 5 | rs35122945 | C | A | 0.067 | -0.043 | 0.0036 | 2.76E-32 | 836703 | 17.518 |
| 6 | rs17238568 | T | G | 0.065 | 0.044 | 0.0033 | 8.94E-39 | 842613 | 20.677 |
| 7 | rs3761740 | A | C | 0.099 | 0.056 | 0.0027 | 1.96E-93 | 842600 | 74.876 |
| 8 | rs10473972 | G | T | 0.249 | 0.061 | 0.0019 | 1.00E-200 | 842627 | 388.211 |
| 9 | rs62366588 | A | C | 0.054 | -0.043 | 0.0040 | 1.05E-27 | 802768 | 12.199 |
| 10 | rs7733436 | T | C | 0.385 | 0.065 | 0.0017 | 1.00E-200 | 842627 | 710.067 |
| 11 | rs144083983 | T | C | 0.066 | -0.048 | 0.0038 | 9.34E-38 | 815611 | 20.367 |
| 12 | rs79058517 | A | T | 0.099 | 0.055 | 0.0027 | 1.39E-90 | 842631 | 72.675 |