

TableS2:Provides SNP from OSA GWAS details in the supplement.

| exposure | SNP         | effect allele | other allele | eaf   | beta   | se    | pval     | F      |
|----------|-------------|---------------|--------------|-------|--------|-------|----------|--------|
| OSA      | rs17438786  | C             | G            | 0.038 | 0.091  | 0.020 | 4.23E-06 | 21.157 |
| OSA      | rs10799768  | T             | G            | 0.172 | -0.052 | 0.010 | 3.49E-07 | 25.958 |
| OSA      | rs140929616 | C             | T            | 0.023 | 0.126  | 0.025 | 6.14E-07 | 24.867 |
| OSA      | rs3845359   | T             | C            | 0.559 | -0.038 | 0.008 | 8.26E-07 | 24.297 |
| OSA      | rs1228509   | C             | A            | 0.656 | 0.047  | 0.008 | 6.41E-09 | 33.706 |
| OSA      | rs16837408  | T             | C            | 0.228 | -0.046 | 0.009 | 8.75E-07 | 24.186 |
| OSA      | rs1554903   | C             | G            | 0.106 | 0.062  | 0.012 | 6.86E-07 | 24.655 |
| OSA      | rs13420560  | T             | C            | 0.060 | 0.076  | 0.016 | 1.85E-06 | 22.750 |
| OSA      | rs76229479  | C             | A            | 0.099 | -0.078 | 0.013 | 2.64E-09 | 35.436 |
| OSA      | rs10928510  | G             | A            | 0.160 | -0.058 | 0.011 | 5.46E-08 | 29.545 |
| OSA      | rs7564231   | G             | A            | 0.880 | 0.060  | 0.012 | 6.58E-07 | 24.734 |
| OSA      | rs12485486  | G             | C            | 0.341 | 0.039  | 0.008 | 1.52E-06 | 23.117 |
| OSA      | rs1436341   | A             | G            | 0.881 | 0.065  | 0.012 | 6.83E-08 | 29.112 |
| OSA      | rs10512823  | C             | T            | 0.078 | -0.073 | 0.015 | 5.43E-07 | 25.104 |
| OSA      | rs114106239 | T             | C            | 0.037 | -0.121 | 0.021 | 1.19E-08 | 32.508 |
| OSA      | rs6797053   | C             | T            | 0.641 | -0.037 | 0.008 | 4.79E-06 | 20.919 |
| OSA      | rs12636366  | T             | C            | 0.057 | -0.092 | 0.017 | 5.43E-08 | 29.557 |
| OSA      | rs935977    | A             | G            | 0.367 | -0.041 | 0.008 | 3.64E-07 | 25.877 |
| OSA      | rs1514985   | A             | G            | 0.475 | 0.037  | 0.008 | 1.05E-06 | 23.841 |
| OSA      | rs139879148 | C             | G            | 0.002 | 0.397  | 0.074 | 8.94E-08 | 28.591 |
| OSA      | rs10938398  | A             | G            | 0.472 | 0.035  | 0.008 | 4.08E-06 | 21.229 |
| OSA      | rs13114985  | G             | T            | 0.338 | 0.046  | 0.008 | 2.01E-08 | 31.484 |
| OSA      | rs12513283  | G             | T            | 0.283 | 0.040  | 0.008 | 3.18E-06 | 21.705 |
| OSA      | rs2170710   | C             | T            | 0.076 | 0.076  | 0.014 | 1.14E-07 | 28.115 |
| OSA      | rs76934143  | T             | A            | 0.046 | 0.083  | 0.018 | 4.35E-06 | 21.105 |
| OSA      | rs6884601   | C             | A            | 0.441 | -0.037 | 0.008 | 1.68E-06 | 22.933 |
| OSA      | rs72818251  | T             | C            | 0.026 | -0.117 | 0.025 | 2.96E-06 | 21.841 |
| OSA      | rs4559013   | G             | A            | 0.552 | -0.037 | 0.008 | 1.98E-06 | 22.610 |
| OSA      | rs60700772  | C             | T            | 0.221 | 0.052  | 0.009 | 2.20E-08 | 31.312 |
| OSA      | rs228152    | C             | T            | 0.159 | 0.052  | 0.010 | 7.46E-07 | 24.492 |
| OSA      | rs7776102   | T             | G            | 0.250 | -0.043 | 0.009 | 1.17E-06 | 23.633 |
| OSA      | rs9767624   | C             | T            | 0.628 | -0.038 | 0.008 | 1.85E-06 | 22.741 |
| OSA      | rs76551806  | T             | C            | 0.068 | 0.072  | 0.015 | 2.11E-06 | 22.492 |
| OSA      | rs2994291   | G             | T            | 0.705 | 0.039  | 0.008 | 4.68E-06 | 20.964 |
| OSA      | rs117287568 | C             | A            | 0.038 | -0.095 | 0.021 | 4.76E-06 | 20.931 |
| OSA      | rs117394950 | G             | A            | 0.036 | -0.099 | 0.021 | 2.71E-06 | 22.013 |
| OSA      | rs10046551  | C             | G            | 0.744 | -0.041 | 0.009 | 3.47E-06 | 21.539 |
| OSA      | rs11981973  | G             | A            | 0.182 | 0.061  | 0.010 | 4.72E-10 | 38.789 |
| OSA      | rs2530482   | A             | C            | 0.739 | -0.046 | 0.009 | 2.65E-07 | 26.487 |
| OSA      | rs146584880 | A             | G            | 0.021 | 0.128  | 0.026 | 1.27E-06 | 23.474 |
| OSA      | rs1808593   | T             | G            | 0.838 | -0.052 | 0.010 | 4.20E-07 | 25.602 |
| OSA      | rs10094779  | G             | A            | 0.308 | 0.045  | 0.008 | 5.31E-08 | 29.599 |
| OSA      | rs74893842  | G             | A            | 0.111 | -0.062 | 0.012 | 5.01E-07 | 25.260 |
| OSA      | rs117528263 | A             | G            | 0.001 | 0.589  | 0.122 | 1.41E-06 | 23.272 |
| OSA      | rs7830638   | G             | A            | 0.190 | 0.047  | 0.010 | 1.52E-06 | 23.126 |
| OSA      | rs56138333  | A             | G            | 0.069 | -0.074 | 0.015 | 1.95E-06 | 22.643 |
| OSA      | rs143481147 | A             | G            | 0.001 | 0.676  | 0.147 | 4.02E-06 | 21.255 |
| OSA      | rs679880    | A             | G            | 0.745 | 0.050  | 0.009 | 2.53E-08 | 31.040 |
| OSA      | rs78270246  | T             | A            | 0.078 | 0.067  | 0.014 | 3.29E-06 | 21.642 |
| OSA      | rs79559022  | T             | G            | 0.052 | 0.079  | 0.017 | 3.00E-06 | 21.814 |
| OSA      | rs72732695  | T             | C            | 0.028 | 0.118  | 0.023 | 1.76E-07 | 27.280 |
| OSA      | rs78189434  | G             | C            | 0.101 | 0.064  | 0.013 | 4.37E-07 | 25.524 |
| OSA      | rs10986730  | T             | C            | 0.524 | -0.047 | 0.008 | 1.16E-09 | 37.029 |
| OSA      | rs574112341 | A             | G            | 0.002 | 0.413  | 0.083 | 5.74E-07 | 24.999 |
| OSA      | rs61844020  | T             | C            | 0.068 | -0.075 | 0.016 | 1.66E-06 | 22.951 |
| OSA      | rs113955098 | A             | G            | 0.067 | -0.099 | 0.016 | 3.38E-10 | 39.444 |
| OSA      | rs75036867  | T             | C            | 0.137 | -0.054 | 0.011 | 1.68E-06 | 22.931 |
| OSA      | rs146411068 | C             | G            | 0.012 | 0.158  | 0.034 | 3.23E-06 | 21.676 |
| OSA      | rs2763355   | A             | G            | 0.497 | 0.036  | 0.008 | 4.58E-06 | 21.007 |
| OSA      | rs61873510  | T             | G            | 0.301 | 0.046  | 0.008 | 3.28E-08 | 30.534 |
| OSA      | rs117147102 | A             | G            | 0.022 | 0.122  | 0.026 | 1.96E-06 | 22.638 |
| OSA      | rs11024007  | T             | A            | 0.133 | 0.056  | 0.011 | 6.70E-07 | 24.698 |

|     |             |   |   |       |        |       |          |        |
|-----|-------------|---|---|-------|--------|-------|----------|--------|
| OSA | rs7107146   | T | C | 0.108 | 0.058  | 0.012 | 2.14E-06 | 22.467 |
| OSA | rs6484367   | A | G | 0.503 | 0.047  | 0.008 | 1.13E-09 | 37.087 |
| OSA | rs2418931   | T | C | 0.310 | 0.041  | 0.008 | 8.72E-07 | 24.193 |
| OSA | rs59333125  | C | A | 0.081 | -0.082 | 0.014 | 1.32E-08 | 32.299 |
| OSA | rs10860169  | G | A | 0.289 | -0.041 | 0.009 | 1.78E-06 | 22.821 |
| OSA | rs10507084  | T | C | 0.179 | 0.065  | 0.010 | 8.23E-11 | 42.203 |
| OSA | rs117228173 | C | T | 0.054 | -0.086 | 0.017 | 7.85E-07 | 24.394 |
| OSA | rs10860265  | T | C | 0.431 | 0.036  | 0.008 | 2.46E-06 | 22.199 |
| OSA | rs2016950   | T | C | 0.158 | -0.059 | 0.011 | 4.13E-08 | 30.085 |
| OSA | rs11619393  | C | T | 0.077 | 0.068  | 0.014 | 1.71E-06 | 22.902 |
| OSA | rs1885767   | G | A | 0.594 | -0.040 | 0.008 | 3.67E-07 | 25.861 |
| OSA | rs73203640  | T | G | 0.210 | 0.043  | 0.009 | 3.40E-06 | 21.577 |
| OSA | rs1359200   | G | A | 0.480 | -0.036 | 0.008 | 4.11E-06 | 21.213 |
| OSA | rs56812253  | C | T | 0.227 | -0.045 | 0.009 | 1.22E-06 | 23.552 |
| OSA | rs150528421 | G | A | 0.034 | 0.096  | 0.021 | 3.86E-06 | 21.335 |
| OSA | rs2790570   | G | A | 0.580 | -0.038 | 0.008 | 1.15E-06 | 23.656 |
| OSA | rs2296327   | T | C | 0.292 | 0.040  | 0.008 | 2.99E-06 | 21.824 |
| OSA | rs2370982   | T | C | 0.238 | 0.052  | 0.009 | 7.97E-09 | 33.283 |
| OSA | rs1959185   | A | G | 0.135 | 0.059  | 0.011 | 1.19E-07 | 28.031 |
| OSA | rs78697049  | T | A | 0.048 | 0.082  | 0.018 | 4.10E-06 | 21.216 |
| OSA | rs17616971  | A | G | 0.565 | 0.036  | 0.008 | 3.48E-06 | 21.532 |
| OSA | rs8025493   | A | G | 0.560 | -0.038 | 0.008 | 7.00E-07 | 24.616 |
| OSA | rs4594227   | G | A | 0.418 | 0.037  | 0.008 | 2.45E-06 | 22.203 |
| OSA | rs11075985  | A | C | 0.429 | 0.082  | 0.008 | 2.15E-26 | #####  |
| OSA | rs12924412  | C | T | 0.142 | 0.055  | 0.011 | 3.91E-07 | 25.738 |
| OSA | rs13333522  | G | C | 0.527 | 0.042  | 0.008 | 4.06E-08 | 30.119 |
| OSA | rs8067286   | G | A | 0.523 | 0.039  | 0.008 | 5.79E-07 | 24.979 |
| OSA | rs4450466   | T | C | 0.122 | 0.059  | 0.012 | 4.16E-07 | 25.618 |
| OSA | rs4987856   | T | C | 0.050 | -0.087 | 0.018 | 1.73E-06 | 22.868 |
| OSA | rs10414145  | G | C | 0.131 | -0.055 | 0.012 | 2.71E-06 | 22.013 |
| OSA | rs72981098  | G | A | 0.138 | 0.056  | 0.011 | 4.98E-07 | 25.270 |
| OSA | rs16966470  | G | C | 0.077 | -0.070 | 0.015 | 1.57E-06 | 23.057 |
| OSA | rs10423928  | A | T | 0.259 | -0.051 | 0.009 | 7.55E-09 | 33.389 |
| OSA | rs58644697  | A | G | 0.230 | -0.044 | 0.009 | 1.63E-06 | 22.983 |
| OSA | rs4809902   | C | G | 0.228 | -0.056 | 0.009 | 1.51E-09 | 36.516 |
| OSA | rs140896965 | T | C | 0.049 | -0.113 | 0.018 | 1.11E-09 | 37.130 |
| OSA | rs2838350   | C | T | 0.677 | 0.038  | 0.008 | 4.34E-06 | 21.110 |
| OSA | rs5758238   | A | G | 0.609 | 0.041  | 0.008 | 1.43E-07 | 27.680 |
| OSA | rs5769152   | T | G | 0.556 | 0.040  | 0.008 | 3.08E-07 | 26.198 |