

**Table 2.** Analyzed genetic index of GENESTART™ DTC genetic testing service and the association to body fat percentage and body mass index

| Associated Phenotypes | Tested Gene           | Tested SNP rsID          | Chr              | Position                  | Minor Allele    | References | Body Fat Percentage |                    |                          | Body Mass Index     |                    |                          |
|-----------------------|-----------------------|--------------------------|------------------|---------------------------|-----------------|------------|---------------------|--------------------|--------------------------|---------------------|--------------------|--------------------------|
|                       |                       |                          |                  |                           |                 |            | Beta                | SD                 | p-value                  | Beta                | SD                 | p-value                  |
| Body mass index       | <b><u>FTO</u></b>     | <b><u>rs9939609</u></b>  | <b><u>16</u></b> | <b><u>53,786,615</u></b>  | <b><u>A</u></b> | (5)        | <b><u>0.36</u></b>  | <b><u>0.09</u></b> | <b><u>&lt;0.0001</u></b> | <b><u>0.42</u></b>  | <b><u>0.06</u></b> | <b><u>&lt;0.0001</u></b> |
|                       | <b><u>MC4R</u></b>    | <b><u>rs17782313</u></b> | <b><u>18</u></b> | <b><u>60,183,864</u></b>  | <b><u>C</u></b> | (6)        | <b><u>0.28</u></b>  | <b><u>0.07</u></b> | <b><u>&lt;0.0001</u></b> | <b><u>0.27</u></b>  | <b><u>0.04</u></b> | <b><u>&lt;0.0001</u></b> |
|                       | <b><u>BDNF</u></b>    | <b><u>rs6265</u></b>     | <b><u>11</u></b> | <b><u>27,658,369</u></b>  | <b><u>T</u></b> | (7)        | <b><u>0.10</u></b>  | <b><u>0.06</u></b> | <b><u>0.09</u></b>       | <b><u>0.16</u></b>  | <b><u>0.04</u></b> | <b><u>&lt;0.0001</u></b> |
| Triglycerides         | ANGPTL3               | rs10889353               | 1                | 62,652,525                | C               | (8)        | -0.02               | 0.02               | 0.37                     | -0.01               | 0.01               | 0.36                     |
|                       | MLXIPL                | rs17145738               | 7                | 73,568,544                | A               | (9)        | 0.15                | 0.10               | 0.12                     | 0.01                | 0.06               | 0.90                     |
|                       | <b><u>TRIB1</u></b>   | <b><u>rs2954029</u></b>  | <b><u>8</u></b>  | <b><u>125,478,730</u></b> | <b><u>A</u></b> | (10)       | <b><u>0.17</u></b>  | <b><u>0.06</u></b> | <b><u>0.005</u></b>      | <b><u>0.04</u></b>  | <b><u>0.04</u></b> | <b><u>0.26</u></b>       |
| LDL cholesterol       | ABO                   | rs635634                 | 9                | 133,279,427               | T               | (11)       | 0.10                | 0.07               | 0.14                     | 0.04                | 0.04               | 0.41                     |
|                       | HMGCR                 | rs12654264               | 5                | 75,352,778                | A               | (12)       | -0.01               | 0.06               | 0.83                     | -0.04               | 0.04               | 0.27                     |
|                       | SORT1                 | rs646776                 | 1                | 109,275,908               | C               | (13)       | -0.03               | 0.13               | 0.80                     | -0.08               | 0.08               | 0.30                     |
|                       | <b><u>ABCA1</u></b>   | <b><u>rs1883025</u></b>  | <b><u>9</u></b>  | <b><u>104,902,020</u></b> | <b><u>T</u></b> | (14)       | <b><u>0.07</u></b>  | <b><u>0.07</u></b> | <b><u>0.30</u></b>       | <b><u>0.09</u></b>  | <b><u>0.04</u></b> | <b><u>0.04</u></b>       |
| HDL cholesterol       | CETP                  | rs1532624                | 16               | 56,971,567                | A               | (15)       | -0.04               | 0.07               | 0.53                     | -0.06               | 0.04               | 0.20                     |
|                       | LIPG                  | rs4939883                | 18               | 49,640,844                | T               | (16)       | 0.02                | 0.07               | 0.80                     | 0.03                | 0.05               | 0.59                     |
|                       | <b><u>MYL2</u></b>    | <b><u>rs12229654</u></b> | <b><u>12</u></b> | <b><u>110,976,657</u></b> | <b><u>G</u></b> | (17)       | <b><u>-0.17</u></b> | <b><u>0.08</u></b> | <b><u>0.04</u></b>       | <b><u>-0.04</u></b> | <b><u>0.06</u></b> | <b><u>0.42</u></b>       |
| Blood sugar           | CDKN2A_B              | rs10811661               | 9                | 22,134,095                | C               | (18)       | -0.04               | 0.06               | 0.45                     | -0.04               | 0.04               | 0.25                     |
|                       | DGKB                  | rs2191349                | 7                | 15,024,684                | G               | (19)       | -0.08               | 0.06               | 0.19                     | -0.06               | 0.04               | 0.15                     |
|                       | <b><u>G6PC2</u></b>   | <b><u>rs560887</u></b>   | <b><u>2</u></b>  | <b><u>168,906,638</u></b> | <b><u>T</u></b> | (20)       | <b><u>0.23</u></b>  | <b><u>0.18</u></b> | <b><u>0.22</u></b>       | <b><u>0.26</u></b>  | <b><u>0.12</u></b> | <b><u>0.03</u></b>       |
|                       | GCK                   | rs1799884                | 7                | 44,189,469                | T               | (21)       | -0.01               | 0.08               | 0.94                     | 0.04                | 0.05               | 0.39                     |
|                       | <b><u>GCKR</u></b>    | <b><u>rs780094</u></b>   | <b><u>2</u></b>  | <b><u>27,518,370</u></b>  | <b><u>T</u></b> | (22)       | <b><u>0.10</u></b>  | <b><u>0.06</u></b> | <b><u>0.09</u></b>       | <b><u>0.14</u></b>  | <b><u>0.04</u></b> | <b><u>0.0002</u></b>     |
|                       | <b><u>GLIS3</u></b>   | <b><u>rs7034200</u></b>  | <b><u>9</u></b>  | <b><u>4,289,050</u></b>   | <b><u>A</u></b> | (23)       | <b><u>0.18</u></b>  | <b><u>0.06</u></b> | <b><u>0.002</u></b>      | <b><u>0.11</u></b>  | <b><u>0.04</u></b> | <b><u>0.004</u></b>      |
|                       | MTNR1B                | rs10830963               | 11               | 92,975,544                | G               | (24)       | 0.11                | 0.06               | 0.07                     | 0.07                | 0.04               | 0.07                     |
|                       | SLC30A8               | rs13266634               | 8                | 117,172,544               | T               | (25)       | -0.07               | 0.06               | 0.23                     | -0.05               | 0.04               | 0.15                     |
|                       | ATP2B1                | rs17249754               | 12               | 89,666,809                | A               | (26)       | 0.06                | 0.06               | 0.34                     | 0.04                | 0.04               | 0.33                     |
| Blood pressure        | CSK                   | rs1378942                | 15               | 74,785,026                | A               | (27)       | -0.13               | 0.08               | 0.11                     | -0.06               | 0.05               | 0.23                     |
|                       | <b><u>CYP17A1</u></b> | <b><u>rs1004467</u></b>  | <b><u>10</u></b> | <b><u>102,834,750</u></b> | <b><u>C</u></b> | (28)       | <b><u>-0.13</u></b> | <b><u>0.07</u></b> | <b><u>0.06</u></b>       | <b><u>-0.08</u></b> | <b><u>0.04</u></b> | <b><u>0.047</u></b>      |
|                       | FGF5                  | rs1458038                | 4                | 80,243,569                | T               | (29)       | -0.04               | 0.06               | 0.53                     | 0.02                | 0.04               | 0.65                     |
|                       | GUCY1A3               | rs13139571               | 4                | 155,724,361               | A               | (30)       | 0.07                | 0.07               | 0.30                     | -0.03               | 0.05               | 0.46                     |
|                       | <b><u>HECTD4</u></b>  | <b><u>rs11066280</u></b> | <b><u>12</u></b> | <b><u>112,379,979</u></b> | <b><u>A</u></b> | (31)       | <b><u>0.19</u></b>  | <b><u>0.08</u></b> | <b><u>0.01</u></b>       | <b><u>0.11</u></b>  | <b><u>0.05</u></b> | <b><u>0.04</u></b>       |
|                       | NPR3                  | rs1173771                | 5                | 32,814,922                | A               | (32)       | -0.02               | 0.06               | 0.73                     | -0.01               | 0.04               | 0.73                     |
| Caffeine metabolism   | <b><u>NT5C2</u></b>   | <b><u>rs11191548</u></b> | <b><u>10</u></b> | <b><u>103,086,421</u></b> | <b><u>C</u></b> | (33)       | <b><u>-0.14</u></b> | <b><u>0.07</u></b> | <b><u>0.04</u></b>       | <b><u>-0.16</u></b> | <b><u>0.04</u></b> | <b><u>0.0003</u></b>     |
|                       | AHR                   | rs4410790                | 7                | 17,244,953                | C               | (34)       | -0.04               | 0.06               | 0.52                     | -0.04               | 0.04               | 0.27                     |
|                       | CYP1A2                | rs762551                 | 15               | 74,749,576                | C               | (35)       | -0.04               | 0.06               | 0.48                     | -0.02               | 0.04               | 0.67                     |

**Note.** Chr: chromosome number; Beta: effect size of linear regression analysis with controlling age and sex as the covariates; Bold and underline: significant association ( $p<0.05$ ) with at least one phenotype.