

Supplemental Table 4: Gene transcripts differentially expressed in overweight and obese patients in the lateral compartment

| Gene symbol | Gene name | Fold change | P value* | Description | Expression intensity | | | |
|-------------|--|-------------|----------|------------------------|----------------------|------------|-------------------|-----------------|
| | | | | | Obese (Mean) | Obese (SD) | Overweight (Mean) | Overweight (SD) |
| ABCA5 | ATP binding cassette subfamily A member 5 | 2.12 | 0.030 | Obese up vs Overweight | 7.12 | 0.65 | 6.16 | 0.38 |
| PCDHB4 | protocadherin beta 4 | 2.08 | 0.045 | Obese up vs Overweight | 6.13 | 0.69 | 5.04 | 0.32 |
| ATP1B2 | ATPase, Na+ | 1.98 | 0.028 | Obese up vs Overweight | 6.69 | 0.57 | 5.78 | 0.46 |
| MIR140 | microRNA 140 | 1.95 | 0.020 | Obese up vs Overweight | 3.71 | 0.54 | 2.83 | 0.18 |
| ASIP | agouti signaling protein | 1.95 | 0.023 | Obese up vs Overweight | 4.53 | 0.59 | 3.90 | 0.19 |
| ZNHIT3 | zinc finger, HIT-type containing 3 | 1.85 | 0.016 | Obese up vs Overweight | 6.57 | 0.48 | 5.80 | 0.23 |
| ZNF627 | zinc finger protein 627 | 1.83 | 0.005 | Obese up vs Overweight | 4.95 | 0.36 | 4.23 | 0.55 |
| APOO | apolipoprotein O | 1.80 | 0.018 | Obese up vs Overweight | 4.83 | 0.46 | 3.98 | 0.25 |
| GIN1 | gypsy retrotransposon integrase 1 | 1.78 | 0.009 | Obese up vs Overweight | 4.38 | 0.41 | 3.56 | 0.52 |
| LDLRAD3 | low density lipoprotein receptor class A domain containing 3 | 1.78 | 0.022 | Obese up vs Overweight | 5.96 | 0.47 | 5.29 | 0.23 |
| BAIAP2L1 | BAI1-associated protein 2-like 1 | 1.75 | 0.015 | Obese up vs Overweight | 5.91 | 0.44 | 5.24 | 0.14 |
| CEP70 | centrosomal protein 70kDa | 1.74 | 0.016 | Obese up vs Overweight | 6.17 | 0.42 | 5.40 | 0.45 |
| GABRA4 | gamma-aminobutyric acid (GABA) A receptor, alpha 4 | 1.74 | 0.009 | Obese up vs Overweight | 7.01 | 0.33 | 6.09 | 0.63 |
| MIR520E | microRNA 520e | 1.70 | 0.030 | Obese up vs Overweight | 4.07 | 0.46 | 3.62 | 0.68 |
| LSM5 | LSM5 homolog, U6 small nuclear RNA and mRNA degradation associated | 1.68 | 0.017 | Obese up vs Overweight | 5.53 | 0.38 | 4.76 | 0.37 |
| MIR4432 | microRNA 4432 | 1.68 | 0.032 | Obese up vs Overweight | 2.60 | 0.51 | 2.19 | 0.23 |
| LINC00885 | long intergenic non-protein coding RNA 885 | 1.67 | 0.006 | Obese up vs Overweight | 4.52 | 0.29 | 3.85 | 0.52 |
| USP12-AS2 | USP12 antisense RNA 2 (head to head) | 1.67 | 0.013 | Obese up vs Overweight | 4.15 | 0.40 | 3.62 | 0.26 |
| TIPARP-AS1 | TIPARP antisense RNA 1 | 1.66 | 0.035 | Obese up vs Overweight | 4.35 | 0.46 | 3.52 | 0.09 |
| PGAM2 | phosphoglycerate mutase 2 (muscle) | 1.66 | 0.036 | Obese up vs Overweight | 6.47 | 0.48 | 5.98 | 0.21 |
| ZFAND1 | zinc finger, AN1-type domain 1 | 1.65 | 0.025 | Obese up vs Overweight | 6.09 | 0.43 | 5.35 | 0.25 |
| LINC00511 | long intergenic non-protein coding RNA 511 | 1.65 | 0.012 | Obese up vs Overweight | 4.49 | 0.39 | 3.96 | 0.16 |
| EIF4EBP1 | eukaryotic translation initiation factor 4E binding protein 1 | 1.64 | 0.006 | Obese up vs Overweight | 5.71 | 0.34 | 5.12 | 0.21 |
| TCEAL8 | transcription elongation factor A (SII)-like 8 | 1.64 | 0.017 | Obese up vs Overweight | 7.75 | 0.41 | 7.08 | 0.17 |
| KCTD4 | potassium channel tetramerization domain containing 4 | 1.62 | 0.026 | Obese up vs Overweight | 4.85 | 0.39 | 4.19 | 0.38 |
| ZNF572 | zinc finger protein 572 | 1.61 | 0.014 | Obese up vs Overweight | 4.88 | 0.42 | 4.48 | 0.41 |
| ZDBF2 | zinc finger, DBF-type containing 2 | 1.61 | 0.023 | Obese up vs Overweight | 6.87 | 0.39 | 6.09 | 0.26 |
| MIPOL1 | mirror-image polydactyly 1 | 1.60 | 0.038 | Obese up vs Overweight | 5.83 | 0.42 | 5.14 | 0.30 |
| MRPL39 | mitochondrial ribosomal protein L39 | 1.60 | 0.001 | Obese up vs Overweight | 6.89 | 0.23 | 6.20 | 0.28 |
| SDHAF4 | succinate dehydrogenase complex assembly factor 4 | 1.60 | 0.016 | Obese up vs Overweight | 5.07 | 0.30 | 4.48 | 0.69 |
| RWDD2B | RWD domain containing 2B | 1.60 | 0.012 | Obese up vs Overweight | 5.89 | 0.34 | 5.31 | 0.35 |
| TAF7 | TAF7 RNA polymerase II, TATA box binding protein (TBP)-associated factor | 1.60 | 0.012 | Obese up vs Overweight | 8.42 | 0.35 | 7.79 | 0.24 |
| TAF1A-AS1 | TAF1A antisense RNA 1 | 1.60 | 0.030 | Obese up vs Overweight | 4.29 | 0.42 | 3.50 | 0.19 |
| FRG1 | FSHD region gene 1 | 1.59 | 0.030 | Obese up vs Overweight | 6.45 | 0.40 | 5.66 | 0.26 |
| MRPS28 | mitochondrial ribosomal protein S28 | 1.59 | 0.045 | Obese up vs Overweight | 7.48 | 0.45 | 6.93 | 0.20 |
| MFSD12 | major facilitator superfamily domain containing 12 | 1.58 | 0.002 | Obese up vs Overweight | 5.01 | 0.35 | 4.72 | 0.05 |
| EGFLAM | EGF-like, fibronectin type III and laminin G domains | 1.58 | 0.015 | Obese up vs Overweight | 4.79 | 0.34 | 4.29 | 0.43 |
| SLC35G4 | solute carrier family 35, member G4 | 1.58 | 0.001 | Obese up vs Overweight | 5.24 | 0.25 | 4.77 | 0.16 |

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|--------------------|--|------|-------|------------------------|------|------|------|------|
| <i>ADPRM</i> | ADP-ribose | 1.58 | 0.025 | Obese up vs Overweight | 5.38 | 0.38 | 4.79 | 0.21 |
| <i>OTUD6B-AS1</i> | OTUD6B antisense RNA 1 (head to head) | 1.58 | 0.043 | Obese up vs Overweight | 7.85 | 0.42 | 7.25 | 0.26 |
| <i>RNMT</i> | RNA (guanine-7-) methyltransferase | 1.57 | 0.036 | Obese up vs Overweight | 6.14 | 0.41 | 5.54 | 0.15 |
| <i>SNRPD1</i> | small nuclear ribonucleoprotein D1 polypeptide | 1.56 | 0.015 | Obese up vs Overweight | 7.22 | 0.37 | 6.76 | 0.08 |
| <i>HIST2H2BE</i> | histone cluster 2, H2be | 1.56 | 0.049 | Obese up vs Overweight | 7.38 | 0.47 | 6.72 | 0.20 |
| <i>TMEM133</i> | transmembrane protein 133 | 1.55 | 0.018 | Obese up vs Overweight | 5.87 | 0.35 | 5.31 | 0.28 |
| <i>HSBP1L1</i> | heat shock factor binding protein 1-like 1 | 1.55 | 0.035 | Obese up vs Overweight | 5.96 | 0.42 | 5.51 | 0.13 |
| <i>ZSCAN16-AS1</i> | ZSCAN16 antisense RNA 1 | 1.55 | 0.040 | Obese up vs Overweight | 4.14 | 0.40 | 3.48 | 0.38 |
| <i>RPS15A</i> | ribosomal protein S15a | 1.55 | 0.017 | Obese up vs Overweight | 7.92 | 0.33 | 7.36 | 0.22 |
| <i>TMEM44-AS1</i> | TMEM44 antisense RNA 1 | 1.55 | 0.030 | Obese up vs Overweight | 5.19 | 0.35 | 4.59 | 0.41 |
| <i>ACAD8</i> | acyl-CoA dehydrogenase family, member 8 | 1.55 | 0.020 | Obese up vs Overweight | 5.55 | 0.39 | 5.21 | 0.22 |
| <i>GPN3</i> | GPN-loop GTPase 3 | 1.54 | 0.038 | Obese up vs Overweight | 4.32 | 0.42 | 3.79 | 0.06 |
| <i>CDKL3</i> | cyclin-dependent kinase-like 3 | 1.54 | 0.003 | Obese up vs Overweight | 4.49 | 0.34 | 3.89 | 0.18 |
| <i>METTL7B</i> | methyltransferase like 7B | 1.54 | 0.009 | Obese up vs Overweight | 4.34 | 0.30 | 3.72 | 0.11 |
| <i>TTC25</i> | tetratricopeptide repeat domain 25 | 1.54 | 0.043 | Obese up vs Overweight | 4.60 | 0.41 | 4.20 | 0.41 |
| <i>NDUFA7</i> | NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 7 | 1.53 | 0.033 | Obese up vs Overweight | 7.22 | 0.39 | 6.70 | 0.12 |
| <i>ZNF248</i> | zinc finger protein 248 | 1.53 | 0.036 | Obese up vs Overweight | 4.63 | 0.39 | 4.19 | 0.13 |
| <i>PABPC5-AS1</i> | PABPC5 antisense RNA 1 | 1.53 | 0.010 | Obese up vs Overweight | 4.06 | 0.33 | 3.62 | 0.05 |
| <i>AMZ2</i> | archaelysin family metalloproteinase 2 | 1.53 | 0.031 | Obese up vs Overweight | 7.35 | 0.38 | 6.89 | 0.20 |
| <i>SEC23B</i> | Sec23 homolog B, COPII coat complex component | 1.52 | 0.012 | Obese up vs Overweight | 6.04 | 0.31 | 5.58 | 0.22 |
| <i>LINC01114</i> | long intergenic non-protein coding RNA 1114 | 1.52 | 0.047 | Obese up vs Overweight | 3.82 | 0.40 | 3.29 | 0.10 |
| <i>KDM4D</i> | lysine (K)-specific demethylase 4D | 1.51 | 0.002 | Obese up vs Overweight | 4.68 | 0.25 | 4.29 | 0.45 |
| <i>SWT1</i> | SWT1 RNA endoribonuclease homolog | 1.51 | 0.004 | Obese up vs Overweight | 5.41 | 0.25 | 4.83 | 0.21 |
| <i>PREX1</i> | phosphatidylinositol-3,4,5-trisphosphate-dependent Rac exchange factor 1 | 1.51 | 0.046 | Obese up vs Overweight | 5.79 | 0.42 | 5.41 | 0.26 |
| <i>DZIP3</i> | DAZ interacting zinc finger protein 3 | 1.51 | 0.033 | Obese up vs Overweight | 6.82 | 0.36 | 6.29 | 0.29 |
| <i>RCHY1</i> | ring finger and CHY zinc finger domain containing 1, E3 ubiquitin protein ligase | 1.51 | 0.011 | Obese up vs Overweight | 4.97 | 0.30 | 4.40 | 0.05 |
| <i>BEX1</i> | brain expressed X-linked 1 | 1.50 | 0.028 | Obese up vs Overweight | 4.71 | 0.37 | 4.34 | 0.24 |
| <i>MZT2B</i> | mitotic spindle organizing protein 2B | 1.50 | 0.007 | Obese up vs Overweight | 5.65 | 0.21 | 5.18 | 0.64 |
| <i>METTL18</i> | methyltransferase like 18 | 1.50 | 0.035 | Obese up vs Overweight | 6.29 | 0.38 | 5.69 | 0.32 |
| <i>MSH3</i> | mutS homolog 3 | 1.50 | 0.011 | Obese up vs Overweight | 6.46 | 0.29 | 5.94 | 0.19 |
| <i>LINC00398</i> | long intergenic non-protein coding RNA 398 | 1.50 | 0.025 | Obese up vs Overweight | 4.32 | 0.36 | 3.99 | 0.33 |
| <i>PCDHB5</i> | protocadherin beta 5 | 1.50 | 0.044 | Obese up vs Overweight | 5.96 | 0.37 | 5.45 | 0.26 |
| <i>RSL24D1</i> | ribosomal L24 domain containing 1 | 1.50 | 0.031 | Obese up vs Overweight | 8.00 | 0.36 | 7.43 | 0.16 |
| <i>DARS</i> | aspartyl-tRNA synthetase | 1.49 | 0.045 | Obese up vs Overweight | 7.83 | 0.40 | 7.27 | 0.10 |
| <i>MORN4</i> | MORN repeat containing 4 | 1.49 | 0.007 | Obese up vs Overweight | 5.00 | 0.26 | 4.44 | 0.30 |
| <i>EIF2A</i> | eukaryotic translation initiation factor 2A, 65kDa | 1.49 | 0.027 | Obese up vs Overweight | 7.53 | 0.35 | 7.05 | 0.08 |
| <i>MIRLET7I</i> | microRNA let-7i | 1.49 | 0.021 | Obese up vs Overweight | 3.79 | 0.31 | 3.33 | 0.37 |
| <i>MKRN1</i> | makorin ring finger protein 1 | 1.49 | 0.013 | Obese up vs Overweight | 4.00 | 0.29 | 3.54 | 0.27 |
| <i>MIR4679-2</i> | microRNA 4679-2 | 1.49 | 0.030 | Obese up vs Overweight | 2.08 | 0.35 | 1.63 | 0.11 |
| <i>SNORD115-31</i> | small nucleolar RNA, C | 1.48 | 0.044 | Obese up vs Overweight | 2.31 | 0.36 | 1.76 | 0.22 |
| <i>MBIP</i> | MAP3K12 binding inhibitory protein 1 | 1.48 | 0.035 | Obese up vs Overweight | 6.03 | 0.35 | 5.47 | 0.18 |
| <i>EPHA8</i> | EPH receptor A8 | 1.48 | 0.017 | Obese up vs Overweight | 4.15 | 0.28 | 3.64 | 0.41 |
| <i>GKAP1</i> | G kinase anchoring protein 1 | 1.48 | 0.025 | Obese up vs Overweight | 4.37 | 0.32 | 3.81 | 0.23 |

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|--------------------|---|------|-------|------------------------|------|------|------|------|
| <i>RPP25L</i> | ribonuclease P | 1.47 | 0.011 | Obese up vs Overweight | 5.67 | 0.30 | 5.27 | 0.21 |
| <i>CBLC</i> | Cbl proto-oncogene C, E3 ubiquitin protein ligase | 1.47 | 0.035 | Obese up vs Overweight | 3.49 | 0.38 | 3.10 | 0.43 |
| <i>THRB-AS1</i> | THRB antisense RNA 1 | 1.47 | 0.031 | Obese up vs Overweight | 4.30 | 0.35 | 3.87 | 0.15 |
| <i>DIAPH3-AS2</i> | DIAPH3 antisense RNA 2 | 1.47 | 0.018 | Obese up vs Overweight | 4.63 | 0.31 | 4.16 | 0.18 |
| <i>GPR42</i> | G protein-coupled receptor 42 (gene) | 1.47 | 0.039 | Obese up vs Overweight | 4.51 | 0.34 | 4.12 | 0.62 |
| <i>MIR138-1</i> | microRNA 138-1 | 1.47 | 0.015 | Obese up vs Overweight | 3.01 | 0.29 | 2.47 | 0.08 |
| <i>SMIM10L2A</i> | small integral membrane protein 10 like 2A | 1.47 | 0.046 | Obese up vs Overweight | 5.23 | 0.32 | 4.62 | 0.56 |
| <i>ARL9</i> | ADP-ribosylation factor like GTPase 9 | 1.47 | 0.031 | Obese up vs Overweight | 3.13 | 0.33 | 2.69 | 0.32 |
| <i>DPH5</i> | diphthamide biosynthesis 5 | 1.47 | 0.013 | Obese up vs Overweight | 5.09 | 0.28 | 4.58 | 0.26 |
| <i>HELT</i> | helt bHLH transcription factor | 1.47 | 0.003 | Obese up vs Overweight | 4.76 | 0.22 | 4.34 | 0.32 |
| <i>GPALPP1</i> | GPALPP motifs containing 1 | 1.46 | 0.012 | Obese up vs Overweight | 6.00 | 0.28 | 5.46 | 0.12 |
| <i>ZNF667-AS1</i> | ZNF667 antisense RNA 1 (head to head) | 1.46 | 0.045 | Obese up vs Overweight | 7.49 | 0.37 | 7.09 | 0.20 |
| <i>GULP1</i> | GULP, engulfment adaptor PTB domain containing 1 | 1.46 | 0.018 | Obese up vs Overweight | 7.05 | 0.31 | 6.42 | 0.07 |
| <i>NDUFA5</i> | NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 5 | 1.46 | 0.004 | Obese up vs Overweight | 5.45 | 0.23 | 4.94 | 0.13 |
| <i>SMIM5</i> | small integral membrane protein 5 | 1.46 | 0.041 | Obese up vs Overweight | 4.92 | 0.37 | 4.51 | 0.12 |
| <i>ITGB3BP</i> | integrin beta 3 binding protein (beta3-endonexin) | 1.46 | 0.031 | Obese up vs Overweight | 5.50 | 0.36 | 4.89 | 0.06 |
| <i>ZNF787</i> | zinc finger protein 787 | 1.46 | 0.016 | Obese up vs Overweight | 6.23 | 0.27 | 5.83 | 0.64 |
| <i>BOLA3</i> | bolA family member 3 | 1.46 | 0.023 | Obese up vs Overweight | 5.54 | 0.33 | 5.18 | 0.03 |
| <i>AIMP1</i> | aminoacyl tRNA synthetase complex-interacting multifunctional protein 1 | 1.45 | 0.024 | Obese up vs Overweight | 8.15 | 0.31 | 7.64 | 0.14 |
| <i>HADH</i> | hydroxyacyl-CoA dehydrogenase | 1.45 | 0.009 | Obese up vs Overweight | 6.31 | 0.28 | 5.93 | 0.20 |
| <i>BBS10</i> | Bardet-Biedl syndrome 10 | 1.45 | 0.010 | Obese up vs Overweight | 6.30 | 0.28 | 5.84 | 0.18 |
| <i>RPL37</i> | ribosomal protein L37 | 1.45 | 0.020 | Obese up vs Overweight | 5.51 | 0.31 | 5.11 | 0.12 |
| <i>LINGO4</i> | leucine rich repeat and Ig domain containing 4 | 1.45 | 0.024 | Obese up vs Overweight | 5.07 | 0.35 | 4.82 | 0.23 |
| <i>FLJ33581</i> | uncharacterized LOC400839 | 1.45 | 0.008 | Obese up vs Overweight | 4.41 | 0.26 | 4.02 | 0.18 |
| <i>LINC00993</i> | long intergenic non-protein coding RNA 993 | 1.45 | 0.036 | Obese up vs Overweight | 3.20 | 0.35 | 2.84 | 0.25 |
| <i>TCEAL1</i> | transcription elongation factor A (SII)-like 1 | 1.44 | 0.031 | Obese up vs Overweight | 6.24 | 0.31 | 5.73 | 0.23 |
| <i>TGDS</i> | TDP-glucose 4,6-dehydratase | 1.44 | 0.040 | Obese up vs Overweight | 6.05 | 0.35 | 5.60 | 0.15 |
| <i>SPANXA2-OT1</i> | SPANXA2 overlapping transcript 1 | 1.44 | 0.036 | Obese up vs Overweight | 3.49 | 0.31 | 3.03 | 0.40 |
| <i>UCHL3</i> | ubiquitin C-terminal hydrolase L3 | 1.44 | 0.036 | Obese up vs Overweight | 6.41 | 0.33 | 5.98 | 0.16 |
| <i>POLI</i> | polymerase (DNA directed) iota | 1.44 | 0.026 | Obese up vs Overweight | 7.17 | 0.30 | 6.63 | 0.15 |
| <i>MEA1</i> | male-enhanced antigen 1 | 1.44 | 0.036 | Obese up vs Overweight | 7.92 | 0.34 | 7.49 | 0.10 |
| <i>SHISA4</i> | shisa family member 4 | 1.44 | 0.049 | Obese up vs Overweight | 6.17 | 0.29 | 5.70 | 0.61 |
| <i>SMG8</i> | SMG8 nonsense mediated mRNA decay factor | 1.44 | 0.007 | Obese up vs Overweight | 5.15 | 0.25 | 4.64 | 0.05 |
| <i>SLC5A3</i> | solute carrier family 5 (sodium | 1.44 | 0.036 | Obese up vs Overweight | 5.46 | 0.31 | 4.93 | 0.30 |
| <i>LINC01356</i> | long intergenic non-protein coding RNA 1356 | 1.44 | 0.028 | Obese up vs Overweight | 5.06 | 0.30 | 4.67 | 0.32 |
| <i>SLC35D3</i> | solute carrier family 35, member D3 | 1.44 | 0.023 | Obese up vs Overweight | 4.80 | 0.29 | 4.33 | 0.16 |
| <i>MANSC4</i> | MANSC domain containing 4 | 1.44 | 0.020 | Obese up vs Overweight | 4.68 | 0.28 | 4.18 | 0.16 |
| <i>FBXO6</i> | F-box protein 6 | 1.43 | 0.008 | Obese up vs Overweight | 4.82 | 0.25 | 4.32 | 0.18 |
| <i>LYSMD3</i> | LysM, putative peptidoglycan-binding, domain containing 3 | 1.43 | 0.035 | Obese up vs Overweight | 5.59 | 0.31 | 5.14 | 0.29 |
| <i>CEBPZOS</i> | CEBPZ opposite strand | 1.43 | 0.002 | Obese up vs Overweight | 7.41 | 0.21 | 6.94 | 0.03 |
| <i>ZNF711</i> | zinc finger protein 711 | 1.43 | 0.032 | Obese up vs Overweight | 4.51 | 0.35 | 4.24 | 0.20 |
| <i>CDKN2AIPNL</i> | CDKN2A interacting protein N-terminal like | 1.43 | 0.009 | Obese up vs Overweight | 5.56 | 0.25 | 5.11 | 0.18 |
| <i>TOMM6</i> | translocase of outer mitochondrial membrane 6 homolog (yeast) | 1.43 | 0.014 | Obese up vs Overweight | 9.11 | 0.26 | 8.60 | 0.15 |

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| <i>PHOSPHO1</i> | phosphatase, orphan 1 | 1.42 | 0.045 | Obese up vs Overweight | 6.00 | 0.34 | 5.69 | 0.37 |
| <i>SVIP</i> | small VCP | 1.42 | 0.012 | Obese up vs Overweight | 4.48 | 0.27 | 4.05 | 0.08 |
| <i>LINC01024</i> | long intergenic non-protein coding RNA 1024 | 1.42 | 0.014 | Obese up vs Overweight | 5.56 | 0.27 | 4.99 | 0.25 |
| <i>RSPH10B2</i> | radial spoke head 10 homolog B2 (Chlamydomonas) | 1.42 | 0.010 | Obese up vs Overweight | 3.26 | 0.26 | 2.85 | 0.06 |
| <i>TIPIN</i> | TIMELESS interacting protein | 1.42 | 0.046 | Obese up vs Overweight | 5.01 | 0.36 | 4.51 | 0.06 |
| <i>FMO4</i> | flavin containing monooxygenase 4 | 1.42 | 0.038 | Obese up vs Overweight | 5.73 | 0.32 | 5.23 | 0.17 |
| <i>RGS19</i> | regulator of G-protein signaling 19 | 1.42 | 0.002 | Obese up vs Overweight | 4.85 | 0.24 | 4.54 | 0.27 |
| <i>NUDT21</i> | nudix hydrolase 21 | 1.42 | 0.019 | Obese up vs Overweight | 8.29 | 0.27 | 7.81 | 0.20 |
| <i>MED14OS</i> | MED14 opposite strand | 1.41 | 0.015 | Obese up vs Overweight | 4.84 | 0.29 | 4.46 | 0.21 |
| <i>ACTR6</i> | ARP6 actin-related protein 6 homolog (yeast) | 1.41 | 0.033 | Obese up vs Overweight | 5.18 | 0.32 | 4.79 | 0.08 |
| <i>LRRC30</i> | leucine rich repeat containing 30 | 1.41 | 0.015 | Obese up vs Overweight | 5.02 | 0.27 | 4.65 | 0.18 |
| <i>DUSP28</i> | dual specificity phosphatase 28 | 1.41 | 0.001 | Obese up vs Overweight | 5.23 | 0.19 | 4.81 | 0.13 |
| <i>TOMM5</i> | translocase of outer mitochondrial membrane 5 homolog (yeast) | 1.41 | 0.028 | Obese up vs Overweight | 6.08 | 0.29 | 5.63 | 0.11 |
| <i>PSRC1</i> | proline | 1.41 | 0.037 | Obese up vs Overweight | 5.28 | 0.35 | 5.02 | 0.03 |
| <i>GJC3</i> | gap junction protein gamma 3 | 1.40 | 0.048 | Obese up vs Overweight | 4.86 | 0.32 | 4.54 | 0.37 |
| <i>LINC00628</i> | long intergenic non-protein coding RNA 628 | 1.40 | 0.007 | Obese up vs Overweight | 3.93 | 0.23 | 3.55 | 0.29 |
| <i>SNORD88B</i> | small nucleolar RNA, C | 1.40 | 0.023 | Obese up vs Overweight | 6.30 | 0.22 | 5.83 | 0.51 |
| <i>SPATC1L</i> | spermatogenesis and centriole associated 1-like | 1.40 | 0.021 | Obese up vs Overweight | 4.93 | 0.28 | 4.63 | 0.37 |
| <i>TM4SF1-AS1</i> | TM4SF1 antisense RNA 1 | 1.40 | 0.000 | Obese up vs Overweight | 3.95 | 0.17 | 3.45 | 0.19 |
| <i>CARD14</i> | caspase recruitment domain family, member 14 | 1.40 | 0.001 | Obese up vs Overweight | 4.90 | 0.20 | 4.57 | 0.14 |
| <i>COX6B2</i> | cytochrome c oxidase subunit VIb polypeptide 2 (testis) | 1.40 | 0.028 | Obese up vs Overweight | 3.68 | 0.35 | 3.51 | 0.22 |
| <i>TRIM16L</i> | tripartite motif containing 16-like | 1.40 | 0.028 | Obese up vs Overweight | 4.75 | 0.29 | 4.35 | 0.23 |
| <i>RANBP6</i> | RAN binding protein 6 | 1.40 | 0.002 | Obese up vs Overweight | 6.13 | 0.21 | 5.68 | 0.10 |
| <i>PSMG1</i> | proteasome (prosome, macropain) assembly chaperone 1 | 1.40 | 0.031 | Obese up vs Overweight | 6.81 | 0.33 | 6.50 | 0.19 |
| <i>ACOT13</i> | acyl-CoA thioesterase 13 | 1.40 | 0.009 | Obese up vs Overweight | 6.88 | 0.22 | 6.41 | 0.22 |
| <i>TAL2</i> | T-cell acute lymphocytic leukemia 2 | 1.40 | 0.007 | Obese up vs Overweight | 4.06 | 0.25 | 3.68 | 0.14 |
| <i>LINC00526</i> | long intergenic non-protein coding RNA 526 | 1.40 | 0.044 | Obese up vs Overweight | 4.18 | 0.32 | 3.85 | 0.31 |
| <i>IFT20</i> | intraflagellar transport 20 | 1.40 | 0.047 | Obese up vs Overweight | 7.61 | 0.32 | 7.12 | 0.22 |
| <i>RIOK2</i> | RIO kinase 2 | 1.40 | 0.028 | Obese up vs Overweight | 6.51 | 0.29 | 6.06 | 0.35 |
| <i>SLC10A5</i> | solute carrier family 10, member 5 | 1.40 | 0.013 | Obese up vs Overweight | 4.62 | 0.26 | 4.17 | 0.05 |
| <i>THAP1</i> | THAP domain containing, apoptosis associated protein 1 | 1.40 | 0.033 | Obese up vs Overweight | 6.53 | 0.31 | 6.13 | 0.10 |
| <i>PUF60</i> | poly-U binding splicing factor 60KDa | 1.39 | 0.038 | Obese up vs Overweight | 5.57 | 0.34 | 5.33 | 0.28 |
| <i>RINL</i> | Ras and Rab interactor like | 1.39 | 0.018 | Obese up vs Overweight | 5.65 | 0.32 | 5.44 | 0.10 |
| <i>MRPL2</i> | mitochondrial ribosomal protein L2 | 1.39 | 0.041 | Obese up vs Overweight | 5.82 | 0.33 | 5.47 | 0.02 |
| <i>LSM8</i> | LSM8 homolog, U6 small nuclear RNA associated | 1.39 | 0.018 | Obese up vs Overweight | 6.69 | 0.27 | 6.29 | 0.15 |
| <i>EMP3</i> | epithelial membrane protein 3 | 1.39 | 0.015 | Obese up vs Overweight | 5.52 | 0.26 | 5.16 | 0.08 |
| <i>KLC3</i> | kinesin light chain 3 | 1.39 | 0.034 | Obese up vs Overweight | 4.83 | 0.33 | 4.58 | 0.15 |
| <i>TMEM101</i> | transmembrane protein 101 | 1.39 | 0.011 | Obese up vs Overweight | 5.36 | 0.25 | 5.00 | 0.12 |
| <i>MED7</i> | mediator complex subunit 7 | 1.39 | 0.016 | Obese up vs Overweight | 5.43 | 0.25 | 4.96 | 0.20 |
| <i>HN1L</i> | hematological and neurological expressed 1-like | 1.39 | 0.033 | Obese up vs Overweight | 5.83 | 0.29 | 5.43 | 0.16 |
| <i>NYAP1</i> | neuronal tyrosine-phosphorylated phosphoinositide-3-kinase adaptor 1 | 1.39 | 0.016 | Obese up vs Overweight | 4.49 | 0.28 | 4.23 | 0.21 |
| <i>ZFP1</i> | ZFP1 zinc finger protein | 1.39 | 0.048 | Obese up vs Overweight | 5.95 | 0.31 | 5.61 | 0.35 |
| <i>MAPKAPK5-AS1</i> | MAPKAPK5 antisense RNA 1 | 1.39 | 0.043 | Obese up vs Overweight | 5.12 | 0.31 | 4.71 | 0.10 |

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|------------------|---|------|-------|------------------------|------|------|------|------|
| <i>ERH</i> | enhancer of rudimentary homolog (<i>Drosophila</i>) | 1.38 | 0.037 | Obese up vs Overweight | 6.92 | 0.32 | 6.53 | 0.08 |
| <i>SLC9A7</i> | solute carrier family 9, subfamily A member 7 | 1.38 | 0.022 | Obese up vs Overweight | 4.84 | 0.29 | 4.51 | 0.12 |
| <i>ITK</i> | IL2-inducible T-cell kinase | 1.38 | 0.015 | Obese up vs Overweight | 3.57 | 0.28 | 3.32 | 0.13 |
| <i>BCDIN3D</i> | BCDIN3 domain containing | 1.38 | 0.017 | Obese up vs Overweight | 4.85 | 0.24 | 4.42 | 0.25 |
| <i>HS3ST6</i> | heparan sulfate (glucosamine) 3-O-sulfotransferase 6 | 1.38 | 0.012 | Obese up vs Overweight | 3.37 | 0.31 | 3.07 | 0.14 |
| <i>IDUA</i> | iduronidase, alpha-L- | 1.38 | 0.034 | Obese up vs Overweight | 4.81 | 0.30 | 4.45 | 0.16 |
| <i>WBP2</i> | WW domain binding protein 2 | 1.38 | 0.017 | Obese up vs Overweight | 6.52 | 0.28 | 6.06 | 0.13 |
| <i>DNAJC30</i> | DnaJ (Hsp40) homolog, subfamily C, member 30 | 1.38 | 0.049 | Obese up vs Overweight | 5.37 | 0.34 | 5.12 | 0.08 |
| <i>LRRC3-AS1</i> | LRRC3 antisense RNA 1 (head to head) | 1.38 | 0.009 | Obese up vs Overweight | 4.50 | 0.22 | 4.15 | 0.29 |
| <i>CWC22</i> | CWC22 homolog, spliceosome-associated protein | 1.38 | 0.037 | Obese up vs Overweight | 7.12 | 0.28 | 6.61 | 0.22 |
| <i>APOPT1</i> | apoptogenic 1, mitochondrial | 1.37 | 0.033 | Obese up vs Overweight | 5.53 | 0.29 | 5.19 | 0.17 |
| <i>QSOX2</i> | quiescin Q6 sulfhydryl oxidase 2 | 1.37 | 0.030 | Obese up vs Overweight | 5.08 | 0.31 | 4.80 | 0.19 |
| <i>ELF5</i> | E74-like factor 5 (ets domain transcription factor) | 1.37 | 0.020 | Obese up vs Overweight | 3.90 | 0.28 | 3.62 | 0.06 |
| <i>USP39</i> | ubiquitin specific peptidase 39 | 1.37 | 0.009 | Obese up vs Overweight | 5.27 | 0.22 | 4.73 | 0.14 |
| <i>SNRPC</i> | small nuclear ribonucleoprotein polypeptide C | 1.37 | 0.006 | Obese up vs Overweight | 5.72 | 0.21 | 5.30 | 0.07 |
| <i>PDHX</i> | pyruvate dehydrogenase complex, component X | 1.37 | 0.034 | Obese up vs Overweight | 6.75 | 0.29 | 6.33 | 0.14 |
| <i>RAD1</i> | RAD1 checkpoint DNA exonuclease | 1.37 | 0.016 | Obese up vs Overweight | 6.54 | 0.25 | 6.08 | 0.11 |
| <i>MIR3163</i> | microRNA 3163 | 1.37 | 0.027 | Obese up vs Overweight | 3.64 | 0.27 | 3.14 | 0.21 |
| <i>PSMD10</i> | proteasome 26S subunit, non-ATPase 10 | 1.37 | 0.021 | Obese up vs Overweight | 6.77 | 0.26 | 6.38 | 0.23 |
| <i>PAN3-AS1</i> | PAN3 antisense RNA 1 | 1.37 | 0.037 | Obese up vs Overweight | 4.81 | 0.31 | 4.48 | 0.13 |
| <i>ATG4A</i> | autophagy related 4A, cysteine peptidase | 1.37 | 0.000 | Obese up vs Overweight | 5.64 | 0.16 | 5.29 | 0.13 |
| <i>DLGAP2</i> | discs, large (<i>Drosophila</i>) homolog-associated protein 2 | 1.37 | 0.010 | Obese up vs Overweight | 3.90 | 0.22 | 3.58 | 0.30 |
| <i>ITIH4-AS1</i> | ITIH4 antisense RNA 1 | 1.37 | 0.043 | Obese up vs Overweight | 4.24 | 0.25 | 3.69 | 0.55 |
| <i>ARL6IP6</i> | ADP-ribosylation factor like GTPase 6 interacting protein 6 | 1.37 | 0.003 | Obese up vs Overweight | 4.86 | 0.17 | 4.38 | 0.23 |
| <i>PLAG1</i> | pleiomorphic adenoma gene 1 | 1.37 | 0.028 | Obese up vs Overweight | 4.48 | 0.25 | 4.04 | 0.27 |
| <i>SYT6</i> | synaptotagmin VI | 1.36 | 0.041 | Obese up vs Overweight | 4.12 | 0.29 | 3.90 | 0.44 |
| <i>GTF2A2</i> | general transcription factor IIA 2 | 1.36 | 0.023 | Obese up vs Overweight | 5.07 | 0.26 | 4.68 | 0.10 |
| <i>GTPBP4</i> | GTP binding protein 4 | 1.36 | 0.002 | Obese up vs Overweight | 6.52 | 0.20 | 6.21 | 0.10 |
| <i>SNHG6</i> | small nucleolar RNA host gene 6 | 1.36 | 0.028 | Obese up vs Overweight | 4.74 | 0.27 | 4.20 | 0.06 |
| <i>TEX28</i> | testis expressed 28 | 1.36 | 0.037 | Obese up vs Overweight | 4.65 | 0.27 | 4.26 | 0.30 |
| <i>CCT8</i> | chaperonin containing TCP1, subunit 8 (theta) | 1.36 | 0.030 | Obese up vs Overweight | 6.75 | 0.28 | 6.40 | 0.08 |
| <i>SHC3</i> | SHC (Src homology 2 domain containing) transforming protein 3 | 1.36 | 0.021 | Obese up vs Overweight | 4.38 | 0.31 | 4.21 | 0.13 |
| <i>NUDCD2</i> | NudC domain containing 2 | 1.36 | 0.038 | Obese up vs Overweight | 6.27 | 0.30 | 5.98 | 0.34 |
| <i>PGK2</i> | phosphoglycerate kinase 2 | 1.36 | 0.030 | Obese up vs Overweight | 3.79 | 0.27 | 3.47 | 0.37 |
| <i>TPD52L2</i> | tumor protein D52-like 2 | 1.36 | 0.036 | Obese up vs Overweight | 6.75 | 0.32 | 6.49 | 0.07 |
| <i>SNHG16</i> | small nucleolar RNA host gene 16 | 1.36 | 0.007 | Obese up vs Overweight | 8.23 | 0.22 | 7.75 | 0.06 |
| <i>PRMT5</i> | protein arginine methyltransferase 5 | 1.36 | 0.024 | Obese up vs Overweight | 5.85 | 0.26 | 5.41 | 0.30 |
| <i>ANK1</i> | ankyrin 1, erythrocytic | 1.36 | 0.000 | Obese up vs Overweight | 4.72 | 0.18 | 4.44 | 0.11 |
| <i>MYF6</i> | myogenic factor 6 (herculin) | 1.36 | 0.040 | Obese up vs Overweight | 3.45 | 0.31 | 3.17 | 0.21 |
| <i>HSPA14</i> | heat shock 70kDa protein 14 | 1.36 | 0.002 | Obese up vs Overweight | 5.31 | 0.20 | 5.00 | 0.06 |
| <i>PCBP4</i> | poly(rC) binding protein 4 | 1.36 | 0.033 | Obese up vs Overweight | 4.97 | 0.27 | 4.70 | 0.38 |
| <i>MZT2A</i> | mitotic spindle organizing protein 2A | 1.36 | 0.035 | Obese up vs Overweight | 3.97 | 0.29 | 3.70 | 0.32 |
| <i>MALSU1</i> | mitochondrial assembly of ribosomal large subunit 1 | 1.36 | 0.005 | Obese up vs Overweight | 5.79 | 0.19 | 5.41 | 0.22 |
| <i>OR2S2</i> | olfactory receptor, family 2, subfamily S, member 2 (gene | 1.36 | 0.039 | Obese up vs Overweight | 4.41 | 0.31 | 4.16 | 0.06 |

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|--------------------|---|------|-------|------------------------|------|------|------|------|
| <i>RARS</i> | arginyl-tRNA synthetase | 1.36 | 0.025 | Obese up vs Overweight | 8.47 | 0.27 | 8.01 | 0.10 |
| <i>METTL5</i> | methyltransferase like 5 | 1.36 | 0.007 | Obese up vs Overweight | 6.92 | 0.21 | 6.49 | 0.11 |
| <i>THOC7</i> | THO complex 7 | 1.36 | 0.015 | Obese up vs Overweight | 7.90 | 0.24 | 7.56 | 0.23 |
| <i>GCHFR</i> | GTP cyclohydrolase I feedback regulator | 1.35 | 0.003 | Obese up vs Overweight | 5.42 | 0.19 | 5.06 | 0.07 |
| <i>VPS37A</i> | vacuolar protein sorting 37 homolog A (S. cerevisiae) | 1.35 | 0.020 | Obese up vs Overweight | 6.47 | 0.24 | 6.11 | 0.20 |
| <i>EHHADH</i> | enoyl-CoA, hydratase | 1.35 | 0.022 | Obese up vs Overweight | 4.92 | 0.24 | 4.54 | 0.19 |
| <i>ZBTB6</i> | zinc finger and BTB domain containing 6 | 1.35 | 0.023 | Obese up vs Overweight | 6.19 | 0.29 | 5.85 | 0.09 |
| <i>LINC00853</i> | long intergenic non-protein coding RNA 853 | 1.35 | 0.027 | Obese up vs Overweight | 5.25 | 0.28 | 4.92 | 0.21 |
| <i>PYCR1</i> | pyrroline-5-carboxylate reductase 1 | 1.35 | 0.039 | Obese up vs Overweight | 5.27 | 0.31 | 5.06 | 0.21 |
| <i>LSM1</i> | LSM1 homolog, mRNA degradation associated | 1.35 | 0.036 | Obese up vs Overweight | 5.45 | 0.27 | 5.12 | 0.24 |
| <i>PTGR2</i> | prostaglandin reductase 2 | 1.35 | 0.042 | Obese up vs Overweight | 5.79 | 0.29 | 5.27 | 0.08 |
| <i>ARHGAP27</i> | Rho GTPase activating protein 27 | 1.35 | 0.032 | Obese up vs Overweight | 4.65 | 0.30 | 4.44 | 0.08 |
| <i>PC</i> | pyruvate carboxylase | 1.35 | 0.041 | Obese up vs Overweight | 4.93 | 0.30 | 4.70 | 0.22 |
| <i>JKAMP</i> | JNK1 | 1.35 | 0.019 | Obese up vs Overweight | 7.02 | 0.25 | 6.66 | 0.11 |
| <i>KBTBD11-OT1</i> | KBTBD11 overlapping transcript 1 | 1.35 | 0.038 | Obese up vs Overweight | 3.61 | 0.27 | 3.25 | 0.19 |
| <i>PLA2G5</i> | phospholipase A2, group V | 1.35 | 0.008 | Obese up vs Overweight | 4.86 | 0.22 | 4.57 | 0.21 |
| <i>STARD6</i> | StAR-related lipid transfer domain containing 6 | 1.35 | 0.033 | Obese up vs Overweight | 4.28 | 0.25 | 3.97 | 0.37 |
| <i>ALDH1L1</i> | aldehyde dehydrogenase 1 family, member L1 | 1.35 | 0.026 | Obese up vs Overweight | 5.01 | 0.30 | 4.81 | 0.03 |
| <i>PTCD2</i> | pentatricopeptide repeat domain 2 | 1.35 | 0.008 | Obese up vs Overweight | 5.15 | 0.21 | 4.82 | 0.03 |
| <i>CFAP58</i> | cilia and flagella associated protein 58 | 1.35 | 0.029 | Obese up vs Overweight | 4.04 | 0.26 | 3.71 | 0.10 |
| <i>PARP10</i> | poly(ADP-ribose) polymerase family member 10 | 1.35 | 0.031 | Obese up vs Overweight | 4.54 | 0.27 | 4.15 | 0.16 |
| <i>LINC00507</i> | long intergenic non-protein coding RNA 507 | 1.35 | 0.040 | Obese up vs Overweight | 3.94 | 0.27 | 3.47 | 0.24 |
| <i>BRWD1-IT2</i> | BRWD1 intronic transcript 2 (non-protein coding) | 1.35 | 0.045 | Obese up vs Overweight | 6.02 | 0.23 | 5.64 | 0.57 |
| <i>ACP6</i> | acid phosphatase 6, lysophosphatidic | 1.35 | 0.045 | Obese up vs Overweight | 6.06 | 0.29 | 5.73 | 0.04 |
| <i>HDHD2</i> | haloacid dehalogenase-like hydrolase domain containing 2 | 1.34 | 0.028 | Obese up vs Overweight | 6.78 | 0.26 | 6.46 | 0.02 |
| <i>GRHL3</i> | grainyhead-like transcription factor 3 | 1.34 | 0.028 | Obese up vs Overweight | 4.11 | 0.28 | 3.84 | 0.02 |
| <i>NAP1L4</i> | nucleosome assembly protein 1-like 4 | 1.34 | 0.025 | Obese up vs Overweight | 5.97 | 0.23 | 5.66 | 0.37 |
| <i>LINC00092</i> | long intergenic non-protein coding RNA 92 | 1.34 | 0.034 | Obese up vs Overweight | 4.40 | 0.29 | 4.21 | 0.32 |
| <i>SUCLG2-AS1</i> | SUCLG2 antisense RNA 1 (head to head) | 1.34 | 0.028 | Obese up vs Overweight | 4.71 | 0.24 | 4.29 | 0.26 |
| <i>IDH1</i> | isocitrate dehydrogenase 1 (NADP+) | 1.34 | 0.017 | Obese up vs Overweight | 6.56 | 0.23 | 6.20 | 0.08 |
| <i>N4BP2L2</i> | NEDD4 binding protein 2-like 2 | 1.34 | 0.033 | Obese up vs Overweight | 7.94 | 0.26 | 7.50 | 0.08 |
| <i>BCCIP</i> | BRCA2 and CDKN1A interacting protein | 1.34 | 0.018 | Obese up vs Overweight | 6.57 | 0.20 | 6.19 | 0.35 |
| <i>PIP4K2C</i> | phosphatidylinositol-5-phosphate 4-kinase, type II, gamma | 1.34 | 0.033 | Obese up vs Overweight | 6.59 | 0.26 | 6.21 | 0.24 |
| <i>HIST1H4H</i> | histone cluster 1, H4h | 1.34 | 0.007 | Obese up vs Overweight | 4.28 | 0.20 | 3.97 | 0.31 |
| <i>DSE</i> | dermatan sulfate epimerase | 1.34 | 0.029 | Obese up vs Overweight | 5.51 | 0.25 | 5.15 | 0.20 |
| <i>ZNF322</i> | zinc finger protein 322 | 1.34 | 0.035 | Obese up vs Overweight | 4.42 | 0.25 | 4.01 | 0.31 |
| <i>THRB</i> | thyroid hormone receptor, beta | 1.34 | 0.048 | Obese up vs Overweight | 6.31 | 0.28 | 5.87 | 0.07 |
| <i>TAF6L</i> | TAF6-like RNA polymerase II, p300 | 1.34 | 0.027 | Obese up vs Overweight | 4.75 | 0.24 | 4.46 | 0.31 |
| <i>SEC14L4</i> | SEC14-like lipid binding 4 | 1.34 | 0.018 | Obese up vs Overweight | 3.53 | 0.21 | 3.23 | 0.40 |
| <i>CPEB1-AS1</i> | CPEB1 antisense RNA 1 | 1.34 | 0.008 | Obese up vs Overweight | 3.46 | 0.23 | 3.19 | 0.19 |
| <i>MIR4756</i> | microRNA 4756 | 1.34 | 0.018 | Obese up vs Overweight | 5.97 | 0.26 | 5.69 | 0.09 |
| <i>YIPF5</i> | Yip1 domain family member 5 | 1.34 | 0.028 | Obese up vs Overweight | 8.99 | 0.26 | 8.63 | 0.13 |
| <i>CCP110</i> | centriolar coiled coil protein 110kDa | 1.34 | 0.036 | Obese up vs Overweight | 6.30 | 0.26 | 5.93 | 0.14 |
| <i>LINC01354</i> | long intergenic non-protein coding RNA 1354 | 1.34 | 0.009 | Obese up vs Overweight | 4.66 | 0.22 | 4.41 | 0.18 |
| <i>PITPNA-AS1</i> | PITPNA antisense RNA 1 | 1.34 | 0.037 | Obese up vs Overweight | 7.39 | 0.26 | 7.07 | 0.20 |

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|-------------------|--|------|-------|------------------------|------|------|------|------|
| <i>MRS2</i> | MRS2 magnesium transporter | 1.33 | 0.046 | Obese up vs Overweight | 6.42 | 0.32 | 6.25 | 0.25 |
| <i>ZNF730</i> | zinc finger protein 730 | 1.33 | 0.031 | Obese up vs Overweight | 3.95 | 0.25 | 3.54 | 0.14 |
| <i>KLHDC9</i> | kelch domain containing 9 | 1.33 | 0.034 | Obese up vs Overweight | 4.83 | 0.25 | 4.49 | 0.22 |
| <i>GLRA4</i> | glycine receptor alpha 4 | 1.33 | 0.039 | Obese up vs Overweight | 4.50 | 0.26 | 4.04 | 0.21 |
| <i>CCDC90B</i> | coiled-coil domain containing 90B | 1.33 | 0.045 | Obese up vs Overweight | 6.34 | 0.27 | 5.95 | 0.11 |
| <i>GLDR</i> | glioblastoma down-regulated RNA | 1.33 | 0.024 | Obese up vs Overweight | 6.81 | 0.22 | 6.30 | 0.38 |
| <i>MRPL43</i> | mitochondrial ribosomal protein L43 | 1.33 | 0.023 | Obese up vs Overweight | 5.80 | 0.24 | 5.42 | 0.06 |
| <i>MRPL49</i> | mitochondrial ribosomal protein L49 | 1.33 | 0.044 | Obese up vs Overweight | 4.57 | 0.29 | 4.31 | 0.22 |
| <i>MRPS35</i> | mitochondrial ribosomal protein S35 | 1.33 | 0.036 | Obese up vs Overweight | 7.04 | 0.27 | 6.57 | 0.06 |
| <i>TMEM209</i> | transmembrane protein 209 | 1.33 | 0.016 | Obese up vs Overweight | 5.78 | 0.22 | 5.40 | 0.21 |
| <i>SLC4A11</i> | solute carrier family 4, sodium borate transporter, member 11 | 1.33 | 0.004 | Obese up vs Overweight | 5.62 | 0.16 | 5.29 | 0.28 |
| <i>PHYHIP</i> | phytanoyl-CoA 2-hydroxylase interacting protein | 1.33 | 0.018 | Obese up vs Overweight | 4.62 | 0.24 | 4.36 | 0.25 |
| <i>NDUFA6</i> | NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6, 14kDa | 1.33 | 0.032 | Obese up vs Overweight | 6.84 | 0.27 | 6.56 | 0.06 |
| <i>SERPINB3</i> | serpin peptidase inhibitor, clade B (ovalbumin), member 3 | 1.33 | 0.010 | Obese up vs Overweight | 2.34 | 0.25 | 2.13 | 0.14 |
| <i>CMTM5</i> | CKLF-like MARVEL transmembrane domain containing 5 | 1.32 | 0.042 | Obese up vs Overweight | 4.71 | 0.26 | 4.40 | 0.23 |
| <i>COPS7A</i> | COP9 signalosome subunit 7A | 1.32 | 0.011 | Obese up vs Overweight | 6.90 | 0.22 | 6.66 | 0.16 |
| <i>H2AFZ</i> | H2A histone family, member Z | 1.32 | 0.047 | Obese up vs Overweight | 6.43 | 0.27 | 6.05 | 0.23 |
| <i>SPR</i> | sepiapterin reductase (7,8-dihydrobiopterin:NADP+ oxidoreductase) | 1.32 | 0.035 | Obese up vs Overweight | 6.11 | 0.29 | 5.85 | 0.00 |
| <i>TRIM59</i> | tripartite motif containing 59 | 1.32 | 0.040 | Obese up vs Overweight | 5.23 | 0.27 | 4.99 | 0.16 |
| <i>CBLN2</i> | cerebellin 2 precursor | 1.32 | 0.002 | Obese up vs Overweight | 5.16 | 0.20 | 4.93 | 0.07 |
| <i>TBCE</i> | tubulin folding cofactor E | 1.32 | 0.023 | Obese up vs Overweight | 5.59 | 0.24 | 5.31 | 0.22 |
| <i>SPCS3</i> | signal peptidase complex subunit 3 | 1.32 | 0.014 | Obese up vs Overweight | 7.09 | 0.22 | 6.77 | 0.14 |
| <i>MRAP</i> | melanocortin 2 receptor accessory protein | 1.32 | 0.011 | Obese up vs Overweight | 4.73 | 0.21 | 4.46 | 0.24 |
| <i>ZNF22</i> | zinc finger protein 22 | 1.32 | 0.041 | Obese up vs Overweight | 5.45 | 0.26 | 5.05 | 0.05 |
| <i>RPS3</i> | ribosomal protein S3 | 1.32 | 0.028 | Obese up vs Overweight | 7.02 | 0.25 | 6.73 | 0.17 |
| <i>DNPEP</i> | aspartyl aminopeptidase | 1.32 | 0.013 | Obese up vs Overweight | 5.25 | 0.19 | 4.97 | 0.33 |
| <i>TFAP2A-AS1</i> | TFAP2A antisense RNA 1 | 1.32 | 0.039 | Obese up vs Overweight | 4.60 | 0.28 | 4.23 | 0.12 |
| <i>NEK11</i> | NIMA-related kinase 11 | 1.32 | 0.023 | Obese up vs Overweight | 5.96 | 0.23 | 5.56 | 0.10 |
| <i>LINC01033</i> | long intergenic non-protein coding RNA 1033 | 1.32 | 0.041 | Obese up vs Overweight | 3.38 | 0.26 | 3.03 | 0.30 |
| <i>ZBTB17</i> | zinc finger and BTB domain containing 17 | 1.32 | 0.020 | Obese up vs Overweight | 5.28 | 0.27 | 5.00 | 0.12 |
| <i>THYN1</i> | thymocyte nuclear protein 1 | 1.32 | 0.039 | Obese up vs Overweight | 6.45 | 0.26 | 6.08 | 0.11 |
| <i>DNAJC19</i> | DnaJ (Hsp40) homolog, subfamily C, member 19 | 1.32 | 0.048 | Obese up vs Overweight | 7.18 | 0.27 | 6.77 | 0.08 |
| <i>SENCR</i> | smooth muscle and endothelial cell enriched migration | 1.32 | 0.004 | Obese up vs Overweight | 5.76 | 0.17 | 5.42 | 0.09 |
| <i>PAAF1</i> | proteasomal ATPase-associated factor 1 | 1.32 | 0.027 | Obese up vs Overweight | 5.65 | 0.22 | 5.27 | 0.20 |
| <i>ZNF738</i> | zinc finger protein 738 | 1.32 | 0.048 | Obese up vs Overweight | 6.19 | 0.24 | 5.83 | 0.39 |
| <i>FOXP4-AS1</i> | FOXP4 antisense RNA 1 | 1.32 | 0.044 | Obese up vs Overweight | 4.77 | 0.26 | 4.49 | 0.23 |
| <i>ATPIF1</i> | ATPase inhibitory factor 1 | 1.31 | 0.041 | Obese up vs Overweight | 6.54 | 0.27 | 6.19 | 0.10 |
| <i>TKT</i> | transketolase | 1.31 | 0.038 | Obese up vs Overweight | 5.79 | 0.25 | 5.50 | 0.21 |
| <i>ZFP2</i> | ZFP2 zinc finger protein | 1.31 | 0.032 | Obese up vs Overweight | 4.98 | 0.24 | 4.63 | 0.21 |
| <i>PLCXD1</i> | phosphatidylinositol-specific phospholipase C, X domain containing 1 | 1.31 | 0.008 | Obese up vs Overweight | 5.09 | 0.21 | 4.86 | 0.17 |
| <i>MIR1251</i> | microRNA 1251 | 1.31 | 0.045 | Obese up vs Overweight | 3.75 | 0.28 | 3.53 | 0.19 |

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|-------------------|---|------|-------|------------------------|------|------|------|------|
| <i>TMEM150A</i> | transmembrane protein 150A | 1.31 | 0.012 | Obese up vs Overweight | 5.34 | 0.22 | 5.12 | 0.28 |
| <i>RUNDC3A</i> | RUN domain containing 3A | 1.31 | 0.049 | Obese up vs Overweight | 4.74 | 0.24 | 4.40 | 0.35 |
| <i>COPS6</i> | COP9 signalosome subunit 6 | 1.31 | 0.015 | Obese up vs Overweight | 7.60 | 0.19 | 7.29 | 0.31 |
| <i>HIST1H2BA</i> | histone cluster 1, H2ba | 1.31 | 0.050 | Obese up vs Overweight | 3.04 | 0.29 | 2.79 | 0.04 |
| <i>PAXIP1-AS1</i> | PAXIP1 antisense RNA 1 (head to head) | 1.31 | 0.026 | Obese up vs Overweight | 4.59 | 0.23 | 4.16 | 0.03 |
| <i>GGACT</i> | gamma-glutamylamine cyclotransferase | 1.31 | 0.007 | Obese up vs Overweight | 4.63 | 0.22 | 4.40 | 0.18 |
| <i>PTDSS2</i> | phosphatidyserine synthase 2 | 1.31 | 0.030 | Obese up vs Overweight | 4.99 | 0.26 | 4.79 | 0.18 |
| <i>HUS1B</i> | HUS1 checkpoint clamp component B | 1.31 | 0.032 | Obese up vs Overweight | 3.55 | 0.22 | 3.24 | 0.35 |
| <i>MNX1</i> | motor neuron and pancreas homeobox 1 | 1.31 | 0.016 | Obese up vs Overweight | 4.90 | 0.22 | 4.65 | 0.16 |
| <i>SRXN1</i> | sulfiredoxin 1 | 1.31 | 0.035 | Obese up vs Overweight | 5.34 | 0.26 | 5.19 | 0.34 |
| <i>TCEAL4</i> | transcription elongation factor A (SII)-like 4 | 1.31 | 0.028 | Obese up vs Overweight | 5.42 | 0.23 | 5.11 | 0.15 |
| <i>HCCAT5</i> | hepatocellular carcinoma associated transcript 5 (non-protein coding) | 1.31 | 0.026 | Obese up vs Overweight | 4.43 | 0.23 | 4.14 | 0.02 |
| <i>ACP1</i> | acid phosphatase 1, soluble | 1.31 | 0.028 | Obese up vs Overweight | 6.58 | 0.24 | 6.22 | 0.05 |
| <i>SNX16</i> | sorting nexin 16 | 1.31 | 0.028 | Obese up vs Overweight | 4.96 | 0.21 | 4.61 | 0.25 |
| <i>TMPO-AS1</i> | TMPO antisense RNA 1 | 1.30 | 0.007 | Obese up vs Overweight | 4.85 | 0.19 | 4.56 | 0.12 |
| <i>FRA10AC1</i> | fragile site, folic acid type, rare, fra(10)(q23.3) or fra(10)(q24.2) candidate 1 | 1.30 | 0.036 | Obese up vs Overweight | 5.72 | 0.25 | 5.33 | 0.19 |
| <i>THAP4</i> | THAP domain containing 4 | 1.30 | 0.037 | Obese up vs Overweight | 5.83 | 0.24 | 5.55 | 0.21 |
| <i>CFL2</i> | cofilin 2 (muscle) | 1.30 | 0.039 | Obese up vs Overweight | 7.23 | 0.26 | 6.73 | 0.07 |
| <i>TBCB</i> | tubulin folding cofactor B | 1.30 | 0.015 | Obese up vs Overweight | 6.61 | 0.22 | 6.27 | 0.07 |
| <i>LRTOMT</i> | leucine rich transmembrane and O-methyltransferase domain containing | 1.30 | 0.027 | Obese up vs Overweight | 4.79 | 0.23 | 4.46 | 0.14 |
| <i>TOMM22</i> | translocase of outer mitochondrial membrane 22 homolog (yeast) | 1.30 | 0.050 | Obese up vs Overweight | 6.46 | 0.27 | 6.17 | 0.11 |
| <i>MIR520A</i> | microRNA 520a | 1.30 | 0.048 | Obese up vs Overweight | 2.69 | 0.26 | 2.41 | 0.20 |
| <i>NDUFA4</i> | NDUFA4, mitochondrial complex associated | 1.30 | 0.034 | Obese up vs Overweight | 5.74 | 0.22 | 5.42 | 0.29 |
| <i>ATF1</i> | activating transcription factor 1 | 1.30 | 0.033 | Obese up vs Overweight | 7.61 | 0.24 | 7.31 | 0.22 |
| <i>IFT46</i> | intraflagellar transport 46 | 1.30 | 0.044 | Obese up vs Overweight | 6.49 | 0.26 | 6.12 | 0.07 |
| <i>EPB41L5</i> | erythrocyte membrane protein band 4.1 like 5 | 1.30 | 0.036 | Obese up vs Overweight | 6.00 | 0.24 | 5.65 | 0.21 |
| <i>PRKAA2</i> | protein kinase, AMP-activated, alpha 2 catalytic subunit | 1.30 | 0.047 | Obese up vs Overweight | 5.72 | 0.25 | 5.32 | 0.15 |
| <i>PTGR1</i> | prostaglandin reductase 1 | 1.30 | 0.010 | Obese up vs Overweight | 7.58 | 0.18 | 7.20 | 0.18 |
| <i>CSNK1G3</i> | casein kinase 1, gamma 3 | 1.30 | 0.015 | Obese up vs Overweight | 7.48 | 0.21 | 7.08 | 0.17 |
| <i>CECR5</i> | cat eye syndrome chromosome region, candidate 5 | 1.30 | 0.036 | Obese up vs Overweight | 4.77 | 0.26 | 4.56 | 0.02 |
| <i>HAUS8</i> | HAUS augmin like complex subunit 8 | 1.30 | 0.043 | Obese up vs Overweight | 5.27 | 0.26 | 4.84 | 0.16 |
| <i>SRP54</i> | signal recognition particle 54kDa | 1.30 | 0.030 | Obese up vs Overweight | 5.68 | 0.23 | 5.32 | 0.11 |
| <i>MTX2</i> | metaxin 2 | 1.30 | 0.039 | Obese up vs Overweight | 6.19 | 0.26 | 5.89 | 0.07 |
| <i>ZCCHC12</i> | zinc finger, CCHC domain containing 12 | 1.30 | 0.034 | Obese up vs Overweight | 3.93 | 0.22 | 3.57 | 0.26 |
| <i>CCDC58</i> | coiled-coil domain containing 58 | 1.30 | 0.024 | Obese up vs Overweight | 4.96 | 0.24 | 4.52 | 0.23 |
| <i>BLZF1</i> | basic leucine zipper nuclear factor 1 | 1.30 | 0.008 | Obese up vs Overweight | 5.79 | 0.20 | 5.47 | 0.12 |
| <i>IFNE</i> | interferon, epsilon | 1.30 | 0.025 | Obese up vs Overweight | 2.42 | 0.23 | 2.14 | 0.04 |
| <i>KCNJ4</i> | potassium channel, inwardly rectifying subfamily J, member 4 | 1.30 | 0.048 | Obese up vs Overweight | 5.29 | 0.29 | 5.17 | 0.24 |
| <i>FANCE</i> | Fanconi anemia complementation group E | 1.30 | 0.006 | Obese up vs Overweight | 3.94 | 0.17 | 3.54 | 0.09 |
| <i>TMEM243</i> | transmembrane protein 243, mitochondrial | 1.29 | 0.032 | Obese up vs Overweight | 6.37 | 0.23 | 5.98 | 0.11 |

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| <i>MRPL51</i> | mitochondrial ribosomal protein L51 | 1.29 | 0.024 | Obese up vs Overweight | 6.16 | 0.24 | 5.84 | 0.03 |
| <i>SREK1IP1</i> | SREK1-interacting protein 1 | 1.29 | 0.018 | Obese up vs Overweight | 5.87 | 0.20 | 5.53 | 0.08 |
| <i>TACSTD2</i> | tumor-associated calcium signal transducer 2 | 1.29 | 0.036 | Obese up vs Overweight | 4.07 | 0.25 | 3.67 | 0.14 |
| <i>HOXD11</i> | homeobox D11 | 1.29 | 0.020 | Obese up vs Overweight | 5.09 | 0.24 | 4.90 | 0.12 |
| <i>GDAP1L1</i> | ganglioside induced differentiation associated protein 1-like 1 | 1.29 | 0.005 | Obese up vs Overweight | 4.94 | 0.19 | 4.74 | 0.16 |
| <i>ZNF492</i> | zinc finger protein 492 | 1.29 | 0.024 | Obese up vs Overweight | 5.45 | 0.22 | 5.12 | 0.15 |
| <i>OR2T27</i> | olfactory receptor, family 2, subfamily T, member 27 | 1.29 | 0.033 | Obese up vs Overweight | 5.43 | 0.23 | 5.14 | 0.11 |
| <i>TCEB3</i> | transcription elongation factor B (SIII), polypeptide 3 (110kDa, elongin A) | 1.29 | 0.021 | Obese up vs Overweight | 5.11 | 0.20 | 4.79 | 0.23 |
| <i>RPS23</i> | ribosomal protein S23 | 1.29 | 0.010 | Obese up vs Overweight | 7.04 | 0.17 | 6.67 | 0.20 |
| <i>MPO</i> | myeloperoxidase | 1.29 | 0.038 | Obese up vs Overweight | 4.45 | 0.21 | 4.14 | 0.31 |
| <i>CYB561A3</i> | cytochrome b561 family, member A3 | 1.29 | 0.037 | Obese up vs Overweight | 5.29 | 0.22 | 5.09 | 0.43 |
| <i>UBB</i> | ubiquitin B | 1.29 | 0.026 | Obese up vs Overweight | 5.09 | 0.21 | 4.67 | 0.09 |
| <i>ZNF749</i> | zinc finger protein 749 | 1.29 | 0.029 | Obese up vs Overweight | 3.76 | 0.25 | 3.56 | 0.07 |
| <i>IGDCC4</i> | immunoglobulin superfamily, DCC subclass, member 4 | 1.29 | 0.041 | Obese up vs Overweight | 3.91 | 0.24 | 3.66 | 0.14 |
| <i>NAE1</i> | NEDD8 activating enzyme E1 subunit 1 | 1.29 | 0.044 | Obese up vs Overweight | 7.03 | 0.23 | 6.65 | 0.24 |
| <i>ANKRD12</i> | ankyrin repeat domain 12 | 1.29 | 0.037 | Obese up vs Overweight | 8.44 | 0.21 | 8.14 | 0.30 |
| <i>SYTL4</i> | synaptotagmin-like 4 | 1.29 | 0.027 | Obese up vs Overweight | 6.25 | 0.21 | 5.96 | 0.24 |
| <i>LAS1L</i> | LAS1-like, ribosome biogenesis factor | 1.29 | 0.044 | Obese up vs Overweight | 6.52 | 0.24 | 6.33 | 0.36 |
| <i>TMEM229B</i> | transmembrane protein 229B | 1.29 | 0.035 | Obese up vs Overweight | 4.65 | 0.23 | 4.46 | 0.34 |
| <i>PPA1</i> | pyrophosphatase (inorganic) 1 | 1.29 | 0.007 | Obese up vs Overweight | 7.62 | 0.19 | 7.24 | 0.16 |
| <i>CABYR</i> | calcium binding tyrosine-(Y)-phosphorylation regulated | 1.29 | 0.014 | Obese up vs Overweight | 4.74 | 0.18 | 4.42 | 0.30 |
| <i>CMC1</i> | C-x(9)-C motif containing 1 | 1.29 | 0.001 | Obese up vs Overweight | 5.59 | 0.14 | 5.20 | 0.06 |
| <i>RANGRF</i> | RAN guanine nucleotide release factor | 1.29 | 0.032 | Obese up vs Overweight | 6.23 | 0.22 | 5.88 | 0.15 |
| <i>POLR3G</i> | polymerase (RNA) III (DNA directed) polypeptide G (32kD) | 1.28 | 0.033 | Obese up vs Overweight | 5.07 | 0.23 | 4.77 | 0.24 |
| <i>HOXA10</i> | homeobox A10 | 1.28 | 0.011 | Obese up vs Overweight | 5.87 | 0.18 | 5.53 | 0.07 |
| <i>MIR2117</i> | microRNA 2117 | 1.28 | 0.038 | Obese up vs Overweight | 5.05 | 0.21 | 4.70 | 0.27 |
| <i>SEC11A</i> | SEC11 homolog A, signal peptidase complex subunit | 1.28 | 0.018 | Obese up vs Overweight | 6.31 | 0.20 | 5.99 | 0.11 |
| <i>KIAA0895</i> | KIAA0895 | 1.28 | 0.040 | Obese up vs Overweight | 4.79 | 0.25 | 4.52 | 0.18 |
| <i>LINC00701</i> | long intergenic non-protein coding RNA 701 | 1.28 | 0.045 | Obese up vs Overweight | 5.26 | 0.29 | 5.13 | 0.13 |
| <i>HLA-G</i> | major histocompatibility complex, class I, G | 1.28 | 0.029 | Obese up vs Overweight | 6.29 | 0.22 | 5.92 | 0.07 |
| <i>KMT5A</i> | lysine (K)-specific methyltransferase 5A | 1.28 | 0.041 | Obese up vs Overweight | 5.61 | 0.25 | 5.34 | 0.15 |
| <i>IFITM1</i> | interferon induced transmembrane protein 1 | 1.28 | 0.034 | Obese up vs Overweight | 9.68 | 0.22 | 9.27 | 0.18 |
| <i>CDCA3</i> | cell division cycle associated 3 | 1.28 | 0.022 | Obese up vs Overweight | 5.00 | 0.22 | 4.81 | 0.27 |
| <i>PDX1</i> | pancreatic and duodenal homeobox 1 | 1.28 | 0.037 | Obese up vs Overweight | 5.18 | 0.24 | 4.97 | 0.17 |
| <i>KRT25</i> | keratin 25, type I | 1.28 | 0.012 | Obese up vs Overweight | 3.20 | 0.22 | 3.03 | 0.06 |
| <i>CYHR1</i> | cysteine | 1.28 | 0.041 | Obese up vs Overweight | 5.48 | 0.24 | 5.19 | 0.07 |
| <i>ZNF536</i> | zinc finger protein 536 | 1.28 | 0.021 | Obese up vs Overweight | 3.94 | 0.21 | 3.68 | 0.03 |
| <i>PCBD2</i> | pterin-4 alpha-carbinolamine dehydratase | 1.28 | 0.034 | Obese up vs Overweight | 5.54 | 0.21 | 5.19 | 0.13 |
| <i>TPPP2</i> | tubulin polymerization-promoting protein family member 2 | 1.28 | 0.026 | Obese up vs Overweight | 4.46 | 0.23 | 4.32 | 0.36 |
| <i>CISD3</i> | CDGSH iron sulfur domain 3 | 1.28 | 0.028 | Obese up vs Overweight | 6.54 | 0.21 | 6.25 | 0.16 |
| <i>WDPCP</i> | WD repeat containing planar cell polarity effector | 1.28 | 0.038 | Obese up vs Overweight | 5.04 | 0.25 | 4.50 | 0.16 |
| <i>APTR</i> | Alu-mediated CDKN1A | 1.28 | 0.037 | Obese up vs Overweight | 5.08 | 0.22 | 4.75 | 0.13 |
| <i>MAP3K13</i> | mitogen-activated protein kinase kinase kinase 13 | 1.28 | 0.011 | Obese up vs Overweight | 5.44 | 0.18 | 5.07 | 0.12 |

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|-----------------|--|------|-------|------------------------|------|------|------|------|
| <i>CDH4</i> | cadherin 4, type 1, R-cadherin (retinal) | 1.28 | 0.044 | Obese up vs Overweight | 4.49 | 0.25 | 4.31 | 0.29 |
| <i>CACNA1H</i> | calcium channel, voltage-dependent, T type, alpha 1H subunit | 1.28 | 0.014 | Obese up vs Overweight | 5.31 | 0.21 | 5.02 | 0.37 |
| <i>TCEA1</i> | transcription elongation factor A (SII), 1 | 1.28 | 0.001 | Obese up vs Overweight | 6.46 | 0.13 | 6.18 | 0.03 |
| <i>ARFGEF3</i> | ARFGEF family member 3 | 1.28 | 0.029 | Obese up vs Overweight | 5.34 | 0.20 | 5.07 | 0.33 |
| <i>AK8</i> | adenylate kinase 8 | 1.28 | 0.031 | Obese up vs Overweight | 4.69 | 0.22 | 4.45 | 0.04 |
| <i>PPP1R26</i> | protein phosphatase 1, regulatory subunit 26 | 1.28 | 0.047 | Obese up vs Overweight | 4.41 | 0.22 | 4.14 | 0.27 |
| <i>MTFR1L</i> | mitochondrial fission regulator 1-like | 1.28 | 0.013 | Obese up vs Overweight | 5.84 | 0.19 | 5.58 | 0.05 |
| <i>TMCC2</i> | transmembrane and coiled-coil domain family 2 | 1.28 | 0.047 | Obese up vs Overweight | 4.94 | 0.23 | 4.58 | 0.07 |
| <i>ISYNA1</i> | inositol-3-phosphate synthase 1 | 1.28 | 0.004 | Obese up vs Overweight | 5.45 | 0.18 | 5.27 | 0.15 |
| <i>SGCZ</i> | sarcoglycan zeta | 1.28 | 0.046 | Obese up vs Overweight | 3.63 | 0.24 | 3.43 | 0.30 |
| <i>SLC6A12</i> | solute carrier family 6 (neurotransmitter transporter), member 12 | 1.28 | 0.015 | Obese up vs Overweight | 5.34 | 0.20 | 5.09 | 0.08 |
| <i>PEX11A</i> | peroxisomal biogenesis factor 11 alpha | 1.28 | 0.016 | Obese up vs Overweight | 4.29 | 0.22 | 4.09 | 0.21 |
| <i>ST7</i> | suppression of tumorigenicity 7 | 1.27 | 0.017 | Obese up vs Overweight | 6.25 | 0.18 | 5.91 | 0.15 |
| <i>SHISA9</i> | shisa family member 9 | 1.27 | 0.007 | Obese up vs Overweight | 3.28 | 0.20 | 3.11 | 0.07 |
| <i>MINCR</i> | MYC-induced long noncoding RNA | 1.27 | 0.043 | Obese up vs Overweight | 6.04 | 0.22 | 5.68 | 0.20 |
| <i>DCLRE1A</i> | DNA cross-link repair 1A | 1.27 | 0.041 | Obese up vs Overweight | 4.63 | 0.22 | 4.38 | 0.36 |
| <i>OCIAD1</i> | OCIA domain containing 1 | 1.27 | 0.047 | Obese up vs Overweight | 7.15 | 0.24 | 6.87 | 0.13 |
| <i>LSM4</i> | LSM4 homolog, U6 small nuclear RNA and mRNA degradation associated | 1.27 | 0.007 | Obese up vs Overweight | 6.17 | 0.18 | 5.95 | 0.07 |
| <i>COX7A2L</i> | cytochrome c oxidase subunit VIIa polypeptide 2 like | 1.27 | 0.025 | Obese up vs Overweight | 4.19 | 0.23 | 3.94 | 0.09 |
| <i>MRPS26</i> | mitochondrial ribosomal protein S26 | 1.27 | 0.034 | Obese up vs Overweight | 6.06 | 0.23 | 5.88 | 0.17 |
| <i>NXNL1</i> | nucleoredoxin-like 1 | 1.27 | 0.036 | Obese up vs Overweight | 5.40 | 0.22 | 5.17 | 0.14 |
| <i>TRMT12</i> | tRNA methyltransferase 12 homolog (<i>S. cerevisiae</i>) | 1.27 | 0.016 | Obese up vs Overweight | 5.07 | 0.17 | 4.72 | 0.18 |
| <i>ZBPB</i> | zona pellucida binding protein | 1.27 | 0.031 | Obese up vs Overweight | 2.99 | 0.23 | 2.80 | 0.16 |
| <i>RPL22</i> | ribosomal protein L22 | 1.27 | 0.023 | Obese up vs Overweight | 5.42 | 0.19 | 5.13 | 0.16 |
| <i>UBE2E1</i> | ubiquitin conjugating enzyme E2E 1 | 1.27 | 0.027 | Obese up vs Overweight | 4.99 | 0.24 | 4.83 | 0.11 |
| <i>HP11026</i> | uncharacterized protein HP11026 | 1.27 | 0.023 | Obese up vs Overweight | 4.12 | 0.20 | 3.85 | 0.15 |
| <i>HOMEZ</i> | homeobox and leucine zipper encoding | 1.27 | 0.036 | Obese up vs Overweight | 5.86 | 0.20 | 5.47 | 0.22 |
| <i>UQCR10</i> | ubiquinol-cytochrome c reductase, complex III subunit X | 1.27 | 0.035 | Obese up vs Overweight | 8.52 | 0.21 | 8.20 | 0.21 |
| <i>RPL31</i> | ribosomal protein L31 | 1.27 | 0.029 | Obese up vs Overweight | 5.87 | 0.22 | 5.40 | 0.11 |
| <i>MDP1</i> | magnesium-dependent phosphatase 1 | 1.27 | 0.025 | Obese up vs Overweight | 6.55 | 0.21 | 6.28 | 0.07 |
| <i>MTIF3</i> | mitochondrial translational initiation factor 3 | 1.27 | 0.041 | Obese up vs Overweight | 6.14 | 0.22 | 5.82 | 0.07 |
| <i>SFT2D3</i> | SFT2 domain containing 3 | 1.27 | 0.009 | Obese up vs Overweight | 5.37 | 0.15 | 5.07 | 0.25 |
| <i>TCEA2</i> | transcription elongation factor A (SII), 2 | 1.27 | 0.009 | Obese up vs Overweight | 5.77 | 0.18 | 5.50 | 0.09 |
| <i>BLOC1S6</i> | biogenesis of lysosomal organelles complex-1, subunit 6, pallidin | 1.27 | 0.025 | Obese up vs Overweight | 7.51 | 0.21 | 7.24 | 0.13 |
| <i>NMT2</i> | N-myristoyltransferase 2 | 1.27 | 0.028 | Obese up vs Overweight | 5.86 | 0.20 | 5.54 | 0.10 |
| <i>PSPN</i> | persephin | 1.27 | 0.046 | Obese up vs Overweight | 5.01 | 0.23 | 4.75 | 0.22 |
| <i>KLHDC4</i> | kelch domain containing 4 | 1.27 | 0.032 | Obese up vs Overweight | 4.65 | 0.22 | 4.43 | 0.15 |
| <i>GPD2</i> | glycerol-3-phosphate dehydrogenase 2 | 1.27 | 0.032 | Obese up vs Overweight | 6.03 | 0.22 | 5.80 | 0.11 |
| <i>WWC2-AS2</i> | WWC2 antisense RNA 2 | 1.26 | 0.019 | Obese up vs Overweight | 4.09 | 0.18 | 3.76 | 0.14 |
| <i>FBXL22</i> | F-box and leucine-rich repeat protein 22 | 1.26 | 0.035 | Obese up vs Overweight | 3.58 | 0.27 | 3.40 | 0.13 |
| <i>RPL9</i> | ribosomal protein L9 | 1.26 | 0.046 | Obese up vs Overweight | 7.56 | 0.21 | 7.19 | 0.22 |

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| <i>PTCH2</i> | patched 2 | 1.26 | 0.019 | Obese up vs Overweight | 5.24 | 0.17 | 4.91 | 0.23 |
| <i>NGLY1</i> | N-glycanase 1 | 1.26 | 0.006 | Obese up vs Overweight | 5.72 | 0.20 | 5.56 | 0.10 |
| <i>SUCLA2</i> | succinate-CoA ligase, ADP-forming, beta subunit | 1.26 | 0.001 | Obese up vs Overweight | 6.41 | 0.12 | 6.09 | 0.11 |
| <i>HBS1L</i> | HBS1-like translational GTPase | 1.26 | 0.046 | Obese up vs Overweight | 7.06 | 0.25 | 6.85 | 0.06 |
| <i>MPP2</i> | membrane protein, palmitoylated 2 | 1.26 | 0.043 | Obese up vs Overweight | 4.66 | 0.27 | 4.57 | 0.07 |
| <i>SLC22A7</i> | solute carrier family 22 (organic anion transporter), member 7 | 1.26 | 0.017 | Obese up vs Overweight | 4.31 | 0.18 | 4.09 | 0.21 |
| <i>TAS1R2</i> | taste receptor, type 1, member 2 | 1.26 | 0.021 | Obese up vs Overweight | 4.74 | 0.18 | 4.51 | 0.23 |
| <i>ELP4</i> | elongator acetyltransferase complex subunit 4 | 1.26 | 0.009 | Obese up vs Overweight | 6.09 | 0.16 | 5.80 | 0.07 |
| <i>TRAF4</i> | TNF receptor-associated factor 4 | 1.26 | 0.014 | Obese up vs Overweight | 5.59 | 0.17 | 5.30 | 0.06 |
| <i>UQCC3</i> | ubiquinol-cytochrome c reductase complex assembly factor 3 | 1.26 | 0.004 | Obese up vs Overweight | 5.00 | 0.14 | 4.67 | 0.12 |
| <i>GRIK5</i> | glutamate receptor, ionotropic, kainate 5 | 1.26 | 0.023 | Obese up vs Overweight | 5.80 | 0.19 | 5.51 | 0.12 |
| <i>SEPHS2</i> | selenophosphate synthetase 2 | 1.26 | 0.014 | Obese up vs Overweight | 6.94 | 0.19 | 6.74 | 0.07 |
| <i>PLIN5</i> | perilipin 5 | 1.26 | 0.029 | Obese up vs Overweight | 6.26 | 0.20 | 6.02 | 0.23 |
| <i>C2CD4C</i> | C2 calcium-dependent domain containing 4C | 1.25 | 0.011 | Obese up vs Overweight | 5.08 | 0.18 | 4.86 | 0.10 |
| <i>HNF4A-AS1</i> | HNF4A antisense RNA 1 | 1.25 | 0.049 | Obese up vs Overweight | 3.15 | 0.22 | 2.92 | 0.22 |
| <i>HNRNPUL2</i> | heterogeneous nuclear ribonucleoprotein U-like 2 | 1.25 | 0.046 | Obese up vs Overweight | 6.65 | 0.22 | 6.42 | 0.19 |
| <i>RPL24</i> | ribosomal protein L24 | 1.25 | 0.000 | Obese up vs Overweight | 6.87 | 0.10 | 6.53 | 0.14 |
| <i>GRIN2A</i> | glutamate receptor, ionotropic, N-methyl D-aspartate 2A | 1.25 | 0.009 | Obese up vs Overweight | 4.56 | 0.18 | 4.37 | 0.07 |
| <i>PIGS</i> | phosphatidylinositol glycan anchor biosynthesis class S | 1.25 | 0.013 | Obese up vs Overweight | 6.32 | 0.18 | 6.11 | 0.08 |
| <i>TRAPPC4</i> | trafficking protein particle complex 4 | 1.25 | 0.019 | Obese up vs Overweight | 6.21 | 0.20 | 6.04 | 0.20 |
| <i>MIR3684</i> | microRNA 3684 | 1.25 | 0.008 | Obese up vs Overweight | 1.81 | 0.16 | 1.49 | 0.06 |
| <i>CCDC117</i> | coiled-coil domain containing 117 | 1.25 | 0.003 | Obese up vs Overweight | 7.06 | 0.16 | 6.88 | 0.16 |
| <i>POLR2H</i> | polymerase (RNA) II (DNA directed) polypeptide H | 1.25 | 0.032 | Obese up vs Overweight | 6.40 | 0.22 | 6.24 | 0.14 |
| <i>RXRA</i> | retinoid X receptor alpha | 1.25 | 0.038 | Obese up vs Overweight | 5.80 | 0.21 | 5.52 | 0.09 |
| <i>MAPRE3</i> | microtubule-associated protein, RP | 1.25 | 0.012 | Obese up vs Overweight | 4.94 | 0.16 | 4.62 | 0.10 |
| <i>ABAT</i> | 4-aminobutyrate aminotransferase | 1.25 | 0.047 | Obese up vs Overweight | 5.46 | 0.20 | 5.18 | 0.20 |
| <i>KLC2</i> | kinesin light chain 2 | 1.25 | 0.047 | Obese up vs Overweight | 5.10 | 0.21 | 4.86 | 0.18 |
| <i>UBTF1</i> | upstream binding transcription factor, RNA polymerase I-like 1 | 1.25 | 0.040 | Obese up vs Overweight | 2.30 | 0.23 | 2.18 | 0.17 |
| <i>CHPT1</i> | choline phosphotransferase 1 | 1.25 | 0.048 | Obese up vs Overweight | 6.43 | 0.19 | 6.11 | 0.27 |
| <i>PLRG1</i> | pleiotropic regulator 1 | 1.25 | 0.021 | Obese up vs Overweight | 6.29 | 0.18 | 5.90 | 0.12 |
| <i>SPP2</i> | secreted phosphoprotein 2 | 1.25 | 0.044 | Obese up vs Overweight | 3.42 | 0.20 | 3.11 | 0.14 |
| <i>HSPB2</i> | heat shock 27kDa protein 2 | 1.24 | 0.043 | Obese up vs Overweight | 4.95 | 0.20 | 4.67 | 0.16 |
| <i>MED10</i> | mediator complex subunit 10 | 1.24 | 0.046 | Obese up vs Overweight | 7.01 | 0.21 | 6.65 | 0.06 |
| <i>TTY11</i> | testis-specific transcript, Y-linked 11 (non-protein coding) | 1.24 | 0.008 | Obese up vs Overweight | 1.97 | 0.15 | 1.70 | 0.13 |
| <i>GPLD1</i> | glycosylphosphatidylinositol specific phospholipase D1 | 1.24 | 0.041 | Obese up vs Overweight | 5.35 | 0.24 | 5.24 | 0.07 |
| <i>AFMID</i> | arylformamidase | 1.24 | 0.045 | Obese up vs Overweight | 4.81 | 0.21 | 4.62 | 0.14 |
| <i>LINC00959</i> | long intergenic non-protein coding RNA 959 | 1.24 | 0.043 | Obese up vs Overweight | 3.97 | 0.20 | 3.73 | 0.12 |
| <i>ZNF385D-AS2</i> | ZNF385D antisense RNA 2 | 1.24 | 0.021 | Obese up vs Overweight | 2.35 | 0.19 | 2.18 | 0.20 |
| <i>ARL14</i> | ADP-ribosylation factor like GTPase 14 | 1.24 | 0.031 | Obese up vs Overweight | 2.70 | 0.24 | 2.62 | 0.18 |
| <i>CYP26A1</i> | cytochrome P450, family 26, subfamily A, polypeptide 1 | 1.24 | 0.030 | Obese up vs Overweight | 4.43 | 0.27 | 4.39 | 0.05 |
| <i>NME7</i> | NME | 1.24 | 0.013 | Obese up vs Overweight | 6.07 | 0.16 | 5.75 | 0.09 |
| <i>MIR30B</i> | microRNA 30b | 1.24 | 0.023 | Obese up vs Overweight | 1.90 | 0.19 | 1.68 | 0.06 |

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| <i>TECPR1</i> | tectonin beta-propeller repeat containing 1 | 1.24 | 0.023 | Obese up vs Overweight | 4.93 | 0.19 | 4.70 | 0.10 |
| <i>ZBTB22</i> | zinc finger and BTB domain containing 22 | 1.24 | 0.017 | Obese up vs Overweight | 5.37 | 0.20 | 5.17 | 0.09 |
| <i>CSTF1</i> | cleavage stimulation factor, 3 pre-RNA, subunit 1 | 1.24 | 0.033 | Obese up vs Overweight | 5.65 | 0.21 | 5.48 | 0.25 |
| <i>CACNG4</i> | calcium channel, voltage-dependent, gamma subunit 4 | 1.24 | 0.010 | Obese up vs Overweight | 4.33 | 0.19 | 4.22 | 0.17 |
| <i>LINC00844</i> | long intergenic non-protein coding RNA 844 | 1.24 | 0.042 | Obese up vs Overweight | 3.19 | 0.22 | 2.84 | 0.14 |
| <i>YWHAE</i> | tyrosine 3-monooxygenase | 1.24 | 0.022 | Obese up vs Overweight | 6.20 | 0.18 | 5.90 | 0.11 |
| <i>SWSAP1</i> | SWIM-type zinc finger 7 associated protein 1 | 1.23 | 0.028 | Obese up vs Overweight | 5.05 | 0.19 | 4.81 | 0.20 |
| <i>ATP5J</i> | ATP synthase, H+ transporting, mitochondrial Fo complex subunit F6 | 1.23 | 0.003 | Obese up vs Overweight | 5.92 | 0.11 | 5.64 | 0.18 |
| <i>NEU3</i> | sialidase 3 (membrane sialidase) | 1.23 | 0.015 | Obese up vs Overweight | 4.84 | 0.17 | 4.64 | 0.11 |
| <i>TOLLIP</i> | toll interacting protein | 1.23 | 0.034 | Obese up vs Overweight | 5.13 | 0.20 | 4.98 | 0.21 |
| <i>ADCK1</i> | aarF domain containing kinase 1 | 1.23 | 0.045 | Obese up vs Overweight | 4.79 | 0.18 | 4.58 | 0.35 |
| <i>LINC01467</i> | long intergenic non-protein coding RNA 1467 | 1.23 | 0.046 | Obese up vs Overweight | 2.71 | 0.20 | 2.43 | 0.06 |
| <i>LIMD1-AS1</i> | LIMD1 antisense RNA 1 | 1.23 | 0.020 | Obese up vs Overweight | 4.63 | 0.16 | 4.40 | 0.21 |
| <i>CFDP1</i> | craniofacial development protein 1 | 1.23 | 0.037 | Obese up vs Overweight | 6.80 | 0.20 | 6.46 | 0.07 |
| <i>TLCD2</i> | TLC domain containing 2 | 1.23 | 0.024 | Obese up vs Overweight | 6.05 | 0.18 | 5.82 | 0.04 |
| <i>LZTS2</i> | leucine zipper, putative tumor suppressor 2 | 1.23 | 0.029 | Obese up vs Overweight | 6.26 | 0.20 | 6.12 | 0.21 |
| <i>DUSP15</i> | dual specificity phosphatase 15 | 1.23 | 0.022 | Obese up vs Overweight | 5.04 | 0.17 | 4.86 | 0.22 |
| <i>TSC22D4</i> | TSC22 domain family, member 4 | 1.23 | 0.039 | Obese up vs Overweight | 5.55 | 0.20 | 5.36 | 0.07 |
| <i>CD244</i> | CD244 molecule, natural killer cell receptor 2B4 | 1.23 | 0.034 | Obese up vs Overweight | 3.98 | 0.22 | 3.83 | 0.09 |
| <i>HNF1B</i> | HNF1 homeobox B | 1.23 | 0.049 | Obese up vs Overweight | 4.03 | 0.28 | 3.97 | 0.06 |
| <i>HNRNPU</i> | heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A) | 1.23 | 0.002 | Obese up vs Overweight | 9.03 | 0.13 | 8.82 | 0.07 |
| <i>TBC1D13</i> | TBC1 domain family, member 13 | 1.23 | 0.031 | Obese up vs Overweight | 5.82 | 0.18 | 5.53 | 0.14 |
| <i>ATF4</i> | activating transcription factor 4 | 1.23 | 0.029 | Obese up vs Overweight | 8.77 | 0.19 | 8.44 | 0.01 |
| <i>ZNF146</i> | zinc finger protein 146 | 1.23 | 0.035 | Obese up vs Overweight | 6.12 | 0.18 | 5.86 | 0.11 |
| <i>TDP2</i> | tyrosyl-DNA phosphodiesterase 2 | 1.23 | 0.042 | Obese up vs Overweight | 6.37 | 0.19 | 6.06 | 0.04 |
| <i>GPBP1L1</i> | GC-rich promoter binding protein 1-like 1 | 1.23 | 0.020 | Obese up vs Overweight | 7.79 | 0.17 | 7.57 | 0.09 |
| <i>ARHGEF16</i> | Rho guanine nucleotide exchange factor 16 | 1.23 | 0.038 | Obese up vs Overweight | 4.76 | 0.22 | 4.63 | 0.14 |
| <i>CITED2</i> | Cbp | 1.23 | 0.009 | Obese up vs Overweight | 6.48 | 0.14 | 6.20 | 0.04 |
| <i>FAM90A9P</i> | putative protein FAM90A9 | 1.23 | 0.025 | Obese up vs Overweight | 5.55 | 0.18 | 5.38 | 0.10 |
| <i>NDUFC2-KCTD14</i> | NDUFC2-KCTD14 readthrough | 1.22 | 0.042 | Obese up vs Overweight | 6.14 | 0.19 | 5.83 | 0.18 |
| <i>NPBWR1</i> | neuropeptides B | 1.22 | 0.022 | Obese up vs Overweight | 4.13 | 0.16 | 3.86 | 0.15 |
| <i>G2E3</i> | G2 | 1.22 | 0.018 | Obese up vs Overweight | 6.05 | 0.15 | 5.78 | 0.19 |
| <i>GCSAML</i> | germinal center-associated, signaling and motility-like | 1.22 | 0.030 | Obese up vs Overweight | 3.45 | 0.18 | 3.24 | 0.12 |
| <i>ILF2</i> | interleukin enhancer binding factor 2 | 1.22 | 0.043 | Obese up vs Overweight | 7.94 | 0.20 | 7.75 | 0.11 |
| <i>TBC1D10A</i> | TBC1 domain family, member 10A | 1.22 | 0.041 | Obese up vs Overweight | 4.70 | 0.18 | 4.51 | 0.25 |
| <i>SLC45A4</i> | solute carrier family 45, member 4 | 1.22 | 0.038 | Obese up vs Overweight | 5.00 | 0.20 | 4.79 | 0.23 |
| <i>ACSL3</i> | acyl-CoA synthetase long-chain family member 3 | 1.22 | 0.025 | Obese up vs Overweight | 7.16 | 0.16 | 6.85 | 0.18 |
| <i>PSMA1</i> | proteasome subunit alpha 1 | 1.22 | 0.018 | Obese up vs Overweight | 5.66 | 0.18 | 5.43 | 0.05 |
| <i>KLHL22</i> | kelch-like family member 22 | 1.22 | 0.043 | Obese up vs Overweight | 4.48 | 0.19 | 4.24 | 0.11 |
| <i>RTCB</i> | RNA 2,3-cyclic phosphate and 5-OH ligase | 1.22 | 0.021 | Obese up vs Overweight | 6.89 | 0.18 | 6.72 | 0.09 |
| <i>TIGAR</i> | TP53 induced glycolysis regulatory phosphatase | 1.22 | 0.030 | Obese up vs Overweight | 4.72 | 0.20 | 4.47 | 0.17 |
| <i>CARD9</i> | caspase recruitment domain family, member 9 | 1.22 | 0.045 | Obese up vs Overweight | 5.29 | 0.20 | 5.10 | 0.17 |
| <i>POLN</i> | polymerase (DNA directed) nu | 1.22 | 0.012 | Obese up vs Overweight | 4.76 | 0.17 | 4.62 | 0.12 |

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| ZNF488 | zinc finger protein 488 | 1.22 | 0.042 | Obese up vs Overweight | 2.42 | 0.21 | 2.24 | 0.11 |
| SMIM7 | small integral membrane protein 7 | 1.22 | 0.019 | Obese up vs Overweight | 5.73 | 0.17 | 5.44 | 0.08 |
| FBN3 | fibrillin 3 | 1.22 | 0.028 | Obese up vs Overweight | 4.70 | 0.17 | 4.58 | 0.32 |
| ONECUT3 | one cut homeobox 3 | 1.22 | 0.035 | Obese up vs Overweight | 4.65 | 0.17 | 4.37 | 0.12 |
| MPG | N-methylpurine DNA glycosylase | 1.22 | 0.010 | Obese up vs Overweight | 5.06 | 0.16 | 4.91 | 0.05 |
| RNF215 | ring finger protein 215 | 1.22 | 0.042 | Obese up vs Overweight | 5.09 | 0.21 | 4.96 | 0.08 |
| ALKBH3 | alkB homolog 3, alpha-ketoglutarate-dependent dioxygenase | 1.21 | 0.045 | Obese up vs Overweight | 6.11 | 0.18 | 5.85 | 0.09 |
| LRRC42 | leucine rich repeat containing 42 | 1.21 | 0.046 | Obese up vs Overweight | 5.74 | 0.20 | 5.53 | 0.18 |
| ATP6V1E1 | ATPase, H+ transporting, lysosomal 31kDa, V1 subunit E1 | 1.21 | 0.038 | Obese up vs Overweight | 6.89 | 0.18 | 6.56 | 0.05 |
| TNN | tenascin N | 1.21 | 0.034 | Obese up vs Overweight | 5.02 | 0.18 | 4.88 | 0.18 |
| SLC10A7 | solute carrier family 10, member 7 | 1.21 | 0.048 | Obese up vs Overweight | 4.52 | 0.21 | 4.37 | 0.19 |
| SDHB | succinate dehydrogenase complex subunit B, iron sulfur (lp) | 1.21 | 0.047 | Obese up vs Overweight | 6.49 | 0.17 | 6.22 | 0.15 |
| CLYBL-AS2 | CLYBL antisense RNA 2 | 1.21 | 0.040 | Obese up vs Overweight | 3.92 | 0.16 | 3.66 | 0.24 |
| RTFDC1 | replication termination factor 2 domain containing 1 | 1.21 | 0.035 | Obese up vs Overweight | 6.38 | 0.16 | 6.16 | 0.23 |
| NOL12 | nucleolar protein 12 | 1.21 | 0.015 | Obese up vs Overweight | 5.70 | 0.12 | 5.43 | 0.22 |
| ZFPM1 | zinc finger protein, FOG family member 1 | 1.20 | 0.024 | Obese up vs Overweight | 5.78 | 0.13 | 5.56 | 0.27 |
| ZP2 | zona pellucida glycoprotein 2 (sperm receptor) | 1.20 | 0.018 | Obese up vs Overweight | 3.66 | 0.16 | 3.45 | 0.04 |
| CDAN1 | codanin 1 | 1.20 | 0.026 | Obese up vs Overweight | 5.45 | 0.15 | 5.19 | 0.16 |
| HSFY2 | heat shock transcription factor, Y-linked 2 | 1.20 | 0.032 | Obese up vs Overweight | 3.15 | 0.18 | 3.03 | 0.05 |
| G6PD | glucose-6-phosphate dehydrogenase | 1.20 | 0.046 | Obese up vs Overweight | 5.04 | 0.20 | 4.96 | 0.18 |
| NANS | N-acetylneuraminic acid synthase | 1.20 | 0.031 | Obese up vs Overweight | 5.31 | 0.15 | 5.04 | 0.15 |
| DPY19L4 | dpy-19-like 4 (C. elegans) | 1.20 | 0.023 | Obese up vs Overweight | 6.94 | 0.12 | 6.73 | 0.31 |
| SARAF | store-operated calcium entry-associated regulatory factor | 1.20 | 0.003 | Obese up vs Overweight | 6.71 | 0.10 | 6.48 | 0.12 |
| CKLF | chemokine-like factor | 1.20 | 0.049 | Obese up vs Overweight | 5.02 | 0.17 | 4.81 | 0.19 |
| CDK2 | cyclin-dependent kinase 2 | 1.19 | 0.029 | Obese up vs Overweight | 6.63 | 0.18 | 6.52 | 0.07 |
| RPL27A | ribosomal protein L27a | 1.19 | 0.030 | Obese up vs Overweight | 6.37 | 0.15 | 6.17 | 0.19 |
| PPCS | phosphopantothenoylcysteine synthetase | 1.19 | 0.035 | Obese up vs Overweight | 6.32 | 0.16 | 6.13 | 0.04 |
| DCHS2 | dachsous cadherin-related 2 | 1.19 | 0.017 | Obese up vs Overweight | 4.72 | 0.12 | 4.51 | 0.19 |
| MBD3L3 | methyl-CpG binding domain protein 3-like 3 | 1.19 | 0.044 | Obese up vs Overweight | 4.93 | 0.19 | 4.79 | 0.15 |
| RAP1A | RAP1A, member of RAS oncogene family | 1.19 | 0.008 | Obese up vs Overweight | 5.72 | 0.11 | 5.52 | 0.18 |
| ORC1 | origin recognition complex subunit 1 | 1.19 | 0.050 | Obese up vs Overweight | 4.36 | 0.22 | 4.35 | 0.15 |
| NSUN3 | NOP2 | 1.19 | 0.026 | Obese up vs Overweight | 6.42 | 0.13 | 6.10 | 0.23 |
| RNF5 | ring finger protein 5, E3 ubiquitin protein ligase | 1.19 | 0.023 | Obese up vs Overweight | 6.12 | 0.16 | 6.01 | 0.09 |
| HSD17B12 | hydroxysteroid (17-beta) dehydrogenase 12 | 1.19 | 0.045 | Obese up vs Overweight | 4.64 | 0.16 | 4.41 | 0.10 |
| SLC6A1 | solute carrier family 6 (neurotransmitter transporter), member 1 | 1.18 | 0.050 | Obese up vs Overweight | 4.89 | 0.16 | 4.76 | 0.26 |
| GTF2A1L | general transcription factor IIA 1-like | 1.18 | 0.046 | Obese up vs Overweight | 6.52 | 0.16 | 6.23 | 0.06 |
| RPL37A | ribosomal protein L37a | 1.18 | 0.037 | Obese up vs Overweight | 4.83 | 0.13 | 4.61 | 0.24 |
| SPAST | spastin | 1.18 | 0.034 | Obese up vs Overweight | 6.64 | 0.15 | 6.45 | 0.11 |
| ALOXE3 | arachidonate lipoxygenase 3 | 1.18 | 0.032 | Obese up vs Overweight | 5.21 | 0.15 | 5.08 | 0.11 |
| RPS6 | ribosomal protein S6 | 1.17 | 0.005 | Obese up vs Overweight | 8.20 | 0.10 | 7.98 | 0.05 |
| MORF4L1 | mortality factor 4 like 1 | 1.17 | 0.024 | Obese up vs Overweight | 5.75 | 0.13 | 5.52 | 0.08 |
| JADE2 | jade family PHD finger 2 | 1.17 | 0.036 | Obese up vs Overweight | 4.93 | 0.13 | 4.79 | 0.26 |

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| <i>PRDX3</i> | peroxiredoxin 3 | 1.17 | 0.045 | Obese up vs Overweight | 7.79 | 0.16 | 7.60 | 0.08 |
| <i>PRPSAP2</i> | phosphoribosyl pyrophosphate synthetase-associated protein 2 | 1.17 | 0.045 | Obese up vs Overweight | 5.79 | 0.15 | 5.49 | 0.16 |
| <i>MIR203B</i> | microRNA 203b | 1.17 | 0.043 | Obese up vs Overweight | 1.72 | 0.17 | 1.58 | 0.03 |
| <i>RPS18</i> | ribosomal protein S18 | 1.16 | 0.016 | Obese up vs Overweight | 7.33 | 0.11 | 7.16 | 0.12 |
| <i>TCP1</i> | t-complex 1 | 1.16 | 0.037 | Obese up vs Overweight | 7.74 | 0.14 | 7.58 | 0.08 |
| <i>PNRC2</i> | proline-rich nuclear receptor coactivator 2 | 1.16 | 0.006 | Obese up vs Overweight | 7.97 | 0.10 | 7.77 | 0.10 |
| <i>SDCCAG8</i> | serologically defined colon cancer antigen 8 | 1.15 | 0.039 | Obese up vs Overweight | 7.25 | 0.14 | 7.10 | 0.08 |
| <i>SRI</i> | sorcin | 1.15 | 0.045 | Obese up vs Overweight | 7.22 | 0.13 | 7.02 | 0.11 |
| <i>WDR86</i> | WD repeat domain 86 | 1.15 | 0.042 | Obese up vs Overweight | 5.16 | 0.14 | 5.08 | 0.16 |
| <i>UBA52</i> | ubiquitin A-52 residue ribosomal protein fusion product 1 | 1.15 | 0.023 | Obese up vs Overweight | 11.57 | 0.12 | 11.42 | 0.05 |
| <i>RHBDD1</i> | rhomoid domain containing 1 | 1.15 | 0.031 | Obese up vs Overweight | 5.32 | 0.13 | 5.16 | 0.10 |
| <i>ZC3HC1</i> | zinc finger, C3HC-type containing 1 | 1.15 | 0.045 | Obese up vs Overweight | 4.81 | 0.14 | 4.61 | 0.08 |
| <i>KIF7</i> | kinesin family member 7 | 1.14 | 0.025 | Obese up vs Overweight | 5.39 | 0.15 | 5.36 | 0.11 |
| <i>MESDC2</i> | mesoderm development candidate 2 | 1.14 | 0.038 | Obese up vs Overweight | 5.97 | 0.13 | 5.81 | 0.05 |
| <i>CANX</i> | calnexin | 1.14 | 0.028 | Obese up vs Overweight | 8.85 | 0.11 | 8.66 | 0.14 |
| <i>COX20</i> | COX20 cytochrome c oxidase assembly factor | 1.14 | 0.040 | Obese up vs Overweight | 8.34 | 0.12 | 8.16 | 0.03 |
| <i>RPS11</i> | ribosomal protein S11 | 1.13 | 0.007 | Obese up vs Overweight | 12.64 | 0.09 | 12.50 | 0.06 |
| <i>HMX2</i> | H6 family homeobox 2 | 1.12 | 0.025 | Obese up vs Overweight | 4.99 | 0.10 | 4.84 | 0.13 |
| <i>EEF1A1</i> | eukaryotic translation elongation factor 1 alpha 1 | 1.12 | 0.001 | Obese up vs Overweight | 5.40 | 0.06 | 5.25 | 0.09 |
| <i>SNORD115-41</i> | small nucleolar RNA, C | -1.13 | 0.039 | Obese down vs Overweight | 1.79 | 0.14 | 1.84 | 0.05 |
| <i>ADGRF4</i> | adhesion G protein-coupled receptor F4 | -1.13 | 0.035 | Obese down vs Overweight | 3.29 | 0.11 | 3.54 | 0.12 |
| <i>SPTBN5</i> | spectrin, beta, non-erythrocytic 5 | -1.15 | 0.043 | Obese down vs Overweight | 5.72 | 0.13 | 5.95 | 0.10 |
| <i>MIR4272</i> | microRNA 4272 | -1.15 | 0.048 | Obese down vs Overweight | 1.63 | 0.16 | 1.78 | 0.11 |
| <i>EXO5</i> | exonuclease 5 | -1.15 | 0.044 | Obese down vs Overweight | 4.61 | 0.13 | 4.80 | 0.10 |
| <i>CEMP1</i> | cementum protein 1 | -1.16 | 0.038 | Obese down vs Overweight | 6.24 | 0.15 | 6.37 | 0.03 |
| <i>NMT1</i> | N-myristoyltransferase 1 | -1.17 | 0.037 | Obese down vs Overweight | 7.41 | 0.14 | 7.67 | 0.19 |
| <i>CDYL2</i> | chromodomain protein, Y-like 2 | -1.18 | 0.044 | Obese down vs Overweight | 5.00 | 0.16 | 5.20 | 0.05 |
| <i>OTUD3</i> | OTU deubiquitinase 3 | -1.19 | 0.044 | Obese down vs Overweight | 5.35 | 0.16 | 5.54 | 0.15 |
| <i>ENTPD6</i> | ectonucleoside triphosphate diphosphohydrolase 6 (putative) | -1.19 | 0.021 | Obese down vs Overweight | 4.82 | 0.17 | 5.02 | 0.06 |
| <i>DCTN1-AS1</i> | DCTN1 antisense RNA 1 | -1.20 | 0.046 | Obese down vs Overweight | 4.33 | 0.16 | 4.63 | 0.22 |
| <i>TJAP1</i> | tight junction associated protein 1 (peripheral) | -1.20 | 0.024 | Obese down vs Overweight | 5.35 | 0.15 | 5.66 | 0.05 |
| <i>ROBO2</i> | roundabout guidance receptor 2 | -1.20 | 0.034 | Obese down vs Overweight | 5.62 | 0.16 | 5.88 | 0.04 |
| <i>EVC2</i> | Ellis van Creveld syndrome 2 | -1.20 | 0.046 | Obese down vs Overweight | 5.59 | 0.16 | 5.86 | 0.24 |
| <i>FSD2</i> | fibronectin type III and SPRY domain containing 2 | -1.20 | 0.021 | Obese down vs Overweight | 4.76 | 0.14 | 4.98 | 0.17 |
| <i>GABRA6</i> | gamma-aminobutyric acid (GABA) A receptor, alpha 6 | -1.20 | 0.040 | Obese down vs Overweight | 3.17 | 0.19 | 3.36 | 0.19 |
| <i>DDX4</i> | DEAD (Asp-Glu-Ala-Asp) box polypeptide 4 | -1.20 | 0.031 | Obese down vs Overweight | 3.14 | 0.17 | 3.26 | 0.20 |
| <i>MIR3935</i> | microRNA 3935 | -1.20 | 0.049 | Obese down vs Overweight | 5.12 | 0.18 | 5.37 | 0.07 |
| <i>LINC01605</i> | long intergenic non-protein coding RNA 1605 | -1.21 | 0.049 | Obese down vs Overweight | 4.41 | 0.18 | 4.60 | 0.24 |
| <i>BIRC7</i> | baculoviral IAP repeat containing 7 | -1.21 | 0.039 | Obese down vs Overweight | 6.05 | 0.17 | 6.34 | 0.17 |
| <i>BIN3</i> | bridging integrator 3 | -1.21 | 0.018 | Obese down vs Overweight | 5.29 | 0.15 | 5.56 | 0.14 |
| <i>DHTKD1</i> | dehydrogenase E1 and transketolase domain containing 1 | -1.22 | 0.038 | Obese down vs Overweight | 5.79 | 0.21 | 5.88 | 0.31 |
| <i>DVL3</i> | dishevelled segment polarity protein 3 | -1.23 | 0.041 | Obese down vs Overweight | 5.87 | 0.19 | 6.16 | 0.09 |
| <i>MYO1H</i> | myosin IH | -1.23 | 0.011 | Obese down vs Overweight | 3.29 | 0.15 | 3.60 | 0.07 |

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| <i>CRYGB</i> | crystallin gamma B | -1.23 | 0.031 | Obese down vs Overweight | 2.75 | 0.18 | 2.98 | 0.14 |
| <i>LINC01018</i> | long intergenic non-protein coding RNA 1018 | -1.23 | 0.019 | Obese down vs Overweight | 4.13 | 0.18 | 4.28 | 0.14 |
| <i>SNORD115-3</i> | small nucleolar RNA, C | -1.23 | 0.038 | Obese down vs Overweight | 1.79 | 0.20 | 2.11 | 0.12 |
| <i>ZNF250</i> | zinc finger protein 250 | -1.23 | 0.010 | Obese down vs Overweight | 5.71 | 0.18 | 5.87 | 0.06 |
| <i>PRDM10</i> | PR domain containing 10 | -1.23 | 0.033 | Obese down vs Overweight | 5.44 | 0.22 | 5.72 | 0.06 |
| <i>MIR1207</i> | microRNA 1207 | -1.23 | 0.033 | Obese down vs Overweight | 2.01 | 0.18 | 2.34 | 0.19 |
| <i>ABCB6</i> | ATP binding cassette subfamily B member 6 (Langereis blood group) | -1.24 | 0.013 | Obese down vs Overweight | 5.35 | 0.15 | 5.68 | 0.13 |
| <i>LINC00102</i> | long intergenic non-protein coding RNA 102 | -1.24 | 0.032 | Obese down vs Overweight | 3.15 | 0.19 | 3.39 | 0.02 |
| <i>DSG1</i> | desmoglein 1 | -1.24 | 0.021 | Obese down vs Overweight | 2.69 | 0.14 | 2.94 | 0.35 |
| <i>GIF</i> | gastric intrinsic factor (vitamin B synthesis) | -1.24 | 0.019 | Obese down vs Overweight | 3.74 | 0.16 | 4.05 | 0.24 |
| <i>ZFPM2-AS1</i> | ZFPM2 antisense RNA 1 | -1.24 | 0.023 | Obese down vs Overweight | 4.08 | 0.19 | 4.27 | 0.06 |
| <i>IL37</i> | interleukin 37 | -1.24 | 0.019 | Obese down vs Overweight | 3.26 | 0.22 | 3.35 | 0.13 |
| <i>TUFT1</i> | tufelin 1 | -1.24 | 0.033 | Obese down vs Overweight | 5.15 | 0.21 | 5.33 | 0.11 |
| <i>PSMD4</i> | proteasome 26S subunit, non-ATPase 4 | -1.24 | 0.031 | Obese down vs Overweight | 5.01 | 0.20 | 5.23 | 0.07 |
| <i>LANCL3</i> | LanC lantibiotic synthetase component C-like 3 (bacterial) | -1.25 | 0.044 | Obese down vs Overweight | 3.84 | 0.20 | 4.14 | 0.31 |
| <i>ZFPM2</i> | zinc finger protein, FOG family member 2 | -1.25 | 0.018 | Obese down vs Overweight | 4.34 | 0.18 | 4.61 | 0.11 |
| <i>MIR648</i> | microRNA 648 | -1.25 | 0.039 | Obese down vs Overweight | 4.46 | 0.22 | 4.65 | 0.13 |
| <i>VTI1A</i> | vesicle transport through interaction with t-SNAREs 1A | -1.25 | 0.021 | Obese down vs Overweight | 5.77 | 0.20 | 5.97 | 0.12 |
| <i>IL12A</i> | interleukin 12A | -1.26 | 0.029 | Obese down vs Overweight | 2.69 | 0.21 | 2.92 | 0.09 |
| <i>FGR</i> | FGR proto-oncogene, Src family tyrosine kinase | -1.26 | 0.009 | Obese down vs Overweight | 5.62 | 0.18 | 5.83 | 0.13 |
| <i>CMTM4</i> | CKLF-like MARVEL transmembrane domain containing 4 | -1.26 | 0.041 | Obese down vs Overweight | 5.82 | 0.21 | 6.12 | 0.20 |
| <i>TTL6</i> | tubulin tyrosine ligase-like family member 6 | -1.26 | 0.021 | Obese down vs Overweight | 3.72 | 0.17 | 4.01 | 0.28 |
| <i>MIR151B</i> | microRNA 151b | -1.26 | 0.044 | Obese down vs Overweight | 5.74 | 0.21 | 6.07 | 0.22 |
| <i>ZBED3</i> | zinc finger, BED-type containing 3 | -1.26 | 0.035 | Obese down vs Overweight | 5.33 | 0.22 | 5.55 | 0.18 |
| <i>TNFRSF19</i> | tumor necrosis factor receptor superfamily, member 19 | -1.26 | 0.014 | Obese down vs Overweight | 4.75 | 0.17 | 5.14 | 0.21 |
| <i>RHOXF1-AS1</i> | RHOXF1 antisense RNA 1 | -1.27 | 0.002 | Obese down vs Overweight | 4.51 | 0.15 | 4.74 | 0.09 |
| <i>MIR3619</i> | microRNA 3619 | -1.27 | 0.036 | Obese down vs Overweight | 7.98 | 0.21 | 8.33 | 0.09 |
| <i>TMEM51</i> | transmembrane protein 51 | -1.27 | 0.025 | Obese down vs Overweight | 4.10 | 0.21 | 4.32 | 0.15 |
| <i>NAPRT</i> | nicotinate phosphoribosyltransferase | -1.27 | 0.036 | Obese down vs Overweight | 4.84 | 0.21 | 5.15 | 0.22 |
| <i>KCNS3</i> | potassium voltage-gated channel, modifier subfamily S, member 3 | -1.27 | 0.012 | Obese down vs Overweight | 4.92 | 0.18 | 5.27 | 0.04 |
| <i>OAS3</i> | 2-5-oligoadenylate synthetase 3 | -1.27 | 0.047 | Obese down vs Overweight | 4.96 | 0.25 | 5.20 | 0.26 |
| <i>FAM201A</i> | family with sequence similarity 201, member A | -1.27 | 0.009 | Obese down vs Overweight | 5.78 | 0.18 | 6.12 | 0.10 |
| <i>ACY3</i> | aminoacylase 3 | -1.27 | 0.014 | Obese down vs Overweight | 4.39 | 0.18 | 4.71 | 0.25 |
| <i>RGL3</i> | ral guanine nucleotide dissociation stimulator-like 3 | -1.28 | 0.046 | Obese down vs Overweight | 5.42 | 0.24 | 5.75 | 0.19 |
| <i>GOLGA8H</i> | golgin A8 family, member H | -1.28 | 0.034 | Obese down vs Overweight | 6.09 | 0.24 | 6.37 | 0.21 |
| <i>HARBI1</i> | harbinger transposase derived 1 | -1.28 | 0.022 | Obese down vs Overweight | 4.95 | 0.22 | 5.18 | 0.02 |
| <i>TPST2</i> | tyrosylprotein sulfotransferase 2 | -1.28 | 0.031 | Obese down vs Overweight | 4.70 | 0.23 | 5.08 | 0.10 |
| <i>MIR3135B</i> | microRNA 3135b | -1.28 | 0.044 | Obese down vs Overweight | 6.30 | 0.24 | 6.60 | 0.09 |
| <i>MIRLET7F2</i> | microRNA let-7f-2 | -1.28 | 0.048 | Obese down vs Overweight | 1.73 | 0.25 | 2.14 | 0.08 |
| <i>XLOC_008559</i> | uncharacterized LOC105378427 | -1.29 | 0.049 | Obese down vs Overweight | 4.07 | 0.24 | 4.38 | 0.20 |
| <i>FAM27L</i> | family with sequence similarity 27-like | -1.29 | 0.030 | Obese down vs Overweight | 5.12 | 0.23 | 5.45 | 0.19 |
| <i>MIR4673</i> | microRNA 4673 | -1.30 | 0.038 | Obese down vs Overweight | 6.42 | 0.25 | 6.74 | 0.22 |
| <i>DENND1A</i> | DENN | -1.30 | 0.027 | Obese down vs Overweight | 5.41 | 0.24 | 5.70 | 0.24 |

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|--------------------------|--|-------|-------|--------------------------|------|------|------|------|
| <i>RBM11</i> | RNA binding motif protein 11 | -1.30 | 0.029 | Obese down vs Overweight | 2.72 | 0.21 | 3.04 | 0.30 |
| <i>SLC17A3</i> | solute carrier family 17 (organic anion transporter), member 3 | -1.30 | 0.029 | Obese down vs Overweight | 3.19 | 0.25 | 3.38 | 0.12 |
| <i>BTN2A1</i> | butyrophilin, subfamily 2, member A1 | -1.30 | 0.042 | Obese down vs Overweight | 6.14 | 0.28 | 6.32 | 0.06 |
| <i>HIST1H2AJ</i> | histone cluster 1, H2aj | -1.30 | 0.034 | Obese down vs Overweight | 2.11 | 0.28 | 2.25 | 0.14 |
| <i>DISC2</i> | disrupted in schizophrenia 2 (non-protein coding) | -1.30 | 0.048 | Obese down vs Overweight | 5.08 | 0.24 | 5.41 | 0.25 |
| <i>HHIPL1</i> | HHIP-like 1 | -1.31 | 0.045 | Obese down vs Overweight | 4.16 | 0.23 | 4.49 | 0.35 |
| <i>LINC00470</i> | long intergenic non-protein coding RNA 470 | -1.31 | 0.027 | Obese down vs Overweight | 2.36 | 0.25 | 2.65 | 0.22 |
| <i>TPRG1-AS1</i> | TPRG1 antisense RNA 1 | -1.31 | 0.048 | Obese down vs Overweight | 4.17 | 0.27 | 4.45 | 0.10 |
| <i>GRAP</i> | GRB2-related adaptor protein | -1.31 | 0.038 | Obese down vs Overweight | 3.71 | 0.25 | 4.05 | 0.05 |
| <i>MAML1</i> | mastermind-like transcriptional coactivator 1 | -1.31 | 0.006 | Obese down vs Overweight | 5.48 | 0.18 | 5.83 | 0.14 |
| <i>AOAH-IT1</i> | AOAH intronic transcript 1 | -1.31 | 0.009 | Obese down vs Overweight | 3.24 | 0.20 | 3.53 | 0.08 |
| <i>CACNB4</i> | calcium channel, voltage-dependent, beta 4 subunit | -1.32 | 0.010 | Obese down vs Overweight | 4.98 | 0.23 | 5.21 | 0.01 |
| <i>CLEC4G</i> | C-type lectin domain family 4, member G | -1.32 | 0.046 | Obese down vs Overweight | 4.02 | 0.26 | 4.33 | 0.26 |
| <i>SMIM17</i> | small integral membrane protein 17 | -1.32 | 0.014 | Obese down vs Overweight | 5.32 | 0.21 | 5.64 | 0.03 |
| <i>MIR323A</i> | microRNA 323a | -1.32 | 0.027 | Obese down vs Overweight | 2.15 | 0.25 | 2.42 | 0.16 |
| <i>DKFZP434A062</i> | uncharacterized LOC26102 | -1.32 | 0.014 | Obese down vs Overweight | 5.01 | 0.26 | 5.24 | 0.10 |
| <i>TRMT44</i> | tRNA methyltransferase 44 homolog (S. cerevisiae) | -1.33 | 0.034 | Obese down vs Overweight | 4.55 | 0.25 | 4.94 | 0.11 |
| <i>DTX2</i> | deltex 2, E3 ubiquitin ligase | -1.33 | 0.026 | Obese down vs Overweight | 5.11 | 0.24 | 5.56 | 0.13 |
| <i>TRGV8</i> | T cell receptor gamma variable 8 | -1.33 | 0.040 | Obese down vs Overweight | 4.62 | 0.27 | 4.89 | 0.04 |
| <i>KCNMA1-AS1</i> | KCNMA1 antisense RNA 1 | -1.33 | 0.011 | Obese down vs Overweight | 5.53 | 0.23 | 5.76 | 0.20 |
| <i>SNORA77</i> | small nucleolar RNA, H | -1.33 | 0.002 | Obese down vs Overweight | 4.69 | 0.22 | 5.17 | 0.15 |
| <i>PIIP5K1</i> | diphosphoinositol pentakisphosphate kinase 1 | -1.33 | 0.040 | Obese down vs Overweight | 6.28 | 0.27 | 6.59 | 0.08 |
| <i>USP30-AS1</i> | USP30 antisense RNA 1 | -1.33 | 0.004 | Obese down vs Overweight | 4.70 | 0.18 | 5.01 | 0.19 |
| <i>RCVRN</i> | recoverin | -1.34 | 0.041 | Obese down vs Overweight | 3.85 | 0.29 | 4.11 | 0.12 |
| <i>RNF31</i> | ring finger protein 31 | -1.34 | 0.018 | Obese down vs Overweight | 5.32 | 0.22 | 5.77 | 0.27 |
| <i>SLA</i> | Src-like-adaptor | -1.34 | 0.048 | Obese down vs Overweight | 5.12 | 0.29 | 5.56 | 0.11 |
| <i>SPINK4</i> | serine peptidase inhibitor, Kazal type 4 | -1.35 | 0.039 | Obese down vs Overweight | 3.98 | 0.26 | 4.29 | 0.33 |
| <i>OR52N1</i> | olfactory receptor, family 52, subfamily N, member 1 | -1.35 | 0.028 | Obese down vs Overweight | 2.66 | 0.28 | 2.97 | 0.20 |
| <i>TMEM63B</i> | transmembrane protein 63B | -1.35 | 0.044 | Obese down vs Overweight | 5.72 | 0.30 | 5.98 | 0.19 |
| <i>UBE2N</i> | ubiquitin conjugating enzyme E2N | -1.35 | 0.041 | Obese down vs Overweight | 5.02 | 0.32 | 5.26 | 0.16 |
| <i>FAM3C</i> | family with sequence similarity 3, member C | -1.36 | 0.003 | Obese down vs Overweight | 5.80 | 0.19 | 6.17 | 0.01 |
| <i>STARD4-AS1</i> | STARD4 antisense RNA 1 | -1.36 | 0.004 | Obese down vs Overweight | 6.51 | 0.23 | 6.76 | 0.16 |
| <i>KRTAP9-6</i> | keratin associated protein 9-6 | -1.36 | 0.041 | Obese down vs Overweight | 1.92 | 0.24 | 2.22 | 0.53 |
| <i>MLN</i> | motilin | -1.36 | 0.049 | Obese down vs Overweight | 4.68 | 0.29 | 5.08 | 0.20 |
| <i>HSD52</i> | uncharacterized LOC729467 | -1.36 | 0.018 | Obese down vs Overweight | 4.27 | 0.24 | 4.68 | 0.20 |
| <i>FGD2</i> | FYVE, RhoGEF and PH domain containing 2 | -1.36 | 0.004 | Obese down vs Overweight | 4.72 | 0.19 | 5.18 | 0.10 |
| <i>FAM209B</i> | family with sequence similarity 209, member B | -1.36 | 0.050 | Obese down vs Overweight | 4.95 | 0.31 | 5.26 | 0.24 |
| <i>FAM225B</i> | family with sequence similarity 225, member B (non-protein coding) | -1.36 | 0.049 | Obese down vs Overweight | 5.85 | 0.35 | 6.03 | 0.25 |
| <i>KLK1</i> | kallikrein 1 | -1.36 | 0.004 | Obese down vs Overweight | 4.80 | 0.23 | 5.38 | 0.04 |
| <i>STAC3</i> | SH3 and cysteine rich domain 3 | -1.37 | 0.012 | Obese down vs Overweight | 4.33 | 0.20 | 4.78 | 0.39 |
| <i>LL22NC03-102D1.18</i> | uncharacterized LOC105372949 | -1.37 | 0.031 | Obese down vs Overweight | 4.81 | 0.28 | 5.17 | 0.11 |
| <i>MIR504</i> | microRNA 504 | -1.37 | 0.015 | Obese down vs Overweight | 4.99 | 0.26 | 5.27 | 0.22 |
| <i>IQCF5-AS1</i> | IQCF5 antisense RNA 1 | -1.38 | 0.011 | Obese down vs Overweight | 2.90 | 0.23 | 3.30 | 0.21 |

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|-------------------|--|-------|-------|--------------------------|------|------|------|------|
| <i>GOLGA8S</i> | golgin A8 family, member S | -1.38 | 0.016 | Obese down vs Overweight | 6.07 | 0.24 | 6.48 | 0.25 |
| <i>ALPP</i> | alkaline phosphatase, placental | -1.38 | 0.025 | Obese down vs Overweight | 4.69 | 0.26 | 5.05 | 0.30 |
| <i>IFNK</i> | interferon, kappa | -1.39 | 0.035 | Obese down vs Overweight | 3.61 | 0.30 | 3.96 | 0.28 |
| <i>OR10K1</i> | olfactory receptor, family 10, subfamily K, member 1 | -1.39 | 0.048 | Obese down vs Overweight | 3.75 | 0.32 | 4.10 | 0.41 |
| <i>MUC16</i> | mucin 16, cell surface associated | -1.39 | 0.004 | Obese down vs Overweight | 5.36 | 0.21 | 5.74 | 0.11 |
| <i>LINC00891</i> | long intergenic non-protein coding RNA 891 | -1.39 | 0.011 | Obese down vs Overweight | 6.55 | 0.25 | 6.99 | 0.20 |
| <i>ZNF34</i> | zinc finger protein 34 | -1.40 | 0.011 | Obese down vs Overweight | 5.54 | 0.25 | 5.93 | 0.18 |
| <i>CRHBP</i> | corticotropin releasing hormone binding protein | -1.40 | 0.027 | Obese down vs Overweight | 4.49 | 0.29 | 5.04 | 0.04 |
| <i>LALBA</i> | lactalbumin, alpha- | -1.41 | 0.027 | Obese down vs Overweight | 3.56 | 0.29 | 4.08 | 0.02 |
| <i>GNA15</i> | guanine nucleotide binding protein (G protein), alpha 15 (Gq class) | -1.41 | 0.025 | Obese down vs Overweight | 4.95 | 0.29 | 5.38 | 0.04 |
| <i>FAM179A</i> | family with sequence similarity 179, member A | -1.42 | 0.022 | Obese down vs Overweight | 4.61 | 0.29 | 5.29 | 0.42 |
| <i>OR52B4</i> | olfactory receptor, family 52, subfamily B, member 4 (gene) | -1.42 | 0.034 | Obese down vs Overweight | 3.39 | 0.37 | 3.61 | 0.21 |
| <i>KRBOX1-AS1</i> | KRBOX1 antisense RNA 1 | -1.43 | 0.039 | Obese down vs Overweight | 3.69 | 0.34 | 4.04 | 0.08 |
| <i>LSAMP-AS1</i> | uncharacterized LOC101926903 | -1.43 | 0.006 | Obese down vs Overweight | 4.82 | 0.23 | 5.32 | 0.05 |
| <i>MIR4306</i> | microRNA 4306 | -1.43 | 0.030 | Obese down vs Overweight | 3.36 | 0.29 | 3.89 | 0.41 |
| <i>DPP10</i> | dipeptidyl-peptidase 10 (inactive) | -1.44 | 0.017 | Obese down vs Overweight | 3.93 | 0.29 | 4.39 | 0.19 |
| <i>SCUBE2</i> | signal peptide, CUB domain, EGF-like 2 | -1.44 | 0.015 | Obese down vs Overweight | 5.33 | 0.28 | 5.80 | 0.09 |
| <i>TTC21B-AS1</i> | TTC21B antisense RNA 1 | -1.44 | 0.001 | Obese down vs Overweight | 4.28 | 0.21 | 4.72 | 0.19 |
| <i>OR6C70</i> | olfactory receptor, family 6, subfamily C, member 70 | -1.44 | 0.050 | Obese down vs Overweight | 2.73 | 0.38 | 3.15 | 0.26 |
| <i>MIR2909</i> | microRNA 2909 | -1.44 | 0.024 | Obese down vs Overweight | 8.67 | 0.30 | 9.18 | 0.05 |
| <i>CCZ1</i> | CCZ1 homolog, vacuolar protein trafficking and biogenesis associated | -1.45 | 0.018 | Obese down vs Overweight | 5.11 | 0.30 | 5.44 | 0.33 |
| <i>OR5T2</i> | olfactory receptor, family 5, subfamily T, member 2 | -1.45 | 0.010 | Obese down vs Overweight | 2.46 | 0.26 | 2.91 | 0.25 |
| <i>GALNT13</i> | polypeptide N-acetylgalactosaminyltransferase 13 | -1.45 | 0.048 | Obese down vs Overweight | 4.14 | 0.33 | 4.70 | 0.49 |
| <i>ZNF26</i> | zinc finger protein 26 | -1.45 | 0.012 | Obese down vs Overweight | 4.89 | 0.27 | 5.37 | 0.06 |
| <i>MAGEC2</i> | MAGE family member C2 | -1.45 | 0.040 | Obese down vs Overweight | 5.82 | 0.36 | 6.19 | 0.09 |
| <i>LVCAT5</i> | liver cancer-associated transcript 5 | -1.45 | 0.017 | Obese down vs Overweight | 2.09 | 0.25 | 2.60 | 0.48 |
| <i>PABPC3</i> | poly(A) binding protein, cytoplasmic 3 | -1.45 | 0.034 | Obese down vs Overweight | 1.96 | 0.36 | 2.39 | 0.15 |
| <i>DMRT2</i> | doublesex and mab-3 related transcription factor 2 | -1.47 | 0.016 | Obese down vs Overweight | 4.36 | 0.31 | 4.78 | 0.23 |
| <i>ZNF736</i> | zinc finger protein 736 | -1.48 | 0.013 | Obese down vs Overweight | 4.94 | 0.33 | 5.25 | 0.23 |
| <i>OR56A1</i> | olfactory receptor, family 56, subfamily A, member 1 | -1.48 | 0.018 | Obese down vs Overweight | 3.04 | 0.30 | 3.50 | 0.33 |
| <i>LRRC8C</i> | leucine rich repeat containing 8 family, member C | -1.49 | 0.019 | Obese down vs Overweight | 4.72 | 0.32 | 5.21 | 0.04 |
| <i>SERPINA5</i> | serpin peptidase inhibitor, clade A (alpha-1 antitrypsin), member 5 | -1.49 | 0.007 | Obese down vs Overweight | 4.60 | 0.28 | 5.08 | 0.16 |
| <i>OR6Y1</i> | olfactory receptor, family 6, subfamily Y, member 1 | -1.50 | 0.037 | Obese down vs Overweight | 4.33 | 0.36 | 4.78 | 0.49 |
| <i>FAM120A</i> | family with sequence similarity 120A | -1.51 | 0.012 | Obese down vs Overweight | 3.58 | 0.31 | 4.03 | 0.21 |
| <i>SSX4B</i> | synovial sarcoma, X breakpoint 4B | -1.51 | 0.031 | Obese down vs Overweight | 4.78 | 0.36 | 5.35 | 0.25 |
| <i>TCHHL1</i> | trichohyalin like 1 | -1.52 | 0.038 | Obese down vs Overweight | 4.58 | 0.39 | 5.10 | 0.18 |
| <i>GSTA3</i> | glutathione S-transferase alpha 3 | -1.52 | 0.049 | Obese down vs Overweight | 2.95 | 0.40 | 3.56 | 0.19 |
| <i>LRRC4C</i> | leucine rich repeat containing 4C | -1.52 | 0.016 | Obese down vs Overweight | 4.71 | 0.33 | 5.21 | 0.10 |
| <i>TAC4</i> | tachykinin 4 (hemokinin) | -1.52 | 0.008 | Obese down vs Overweight | 6.32 | 0.29 | 6.72 | 0.41 |
| <i>LINC01053</i> | long intergenic non-protein coding RNA 1053 | -1.53 | 0.037 | Obese down vs Overweight | 4.40 | 0.38 | 4.90 | 0.25 |
| <i>TRPC7</i> | transient receptor potential cation channel, subfamily C, member 7 | -1.53 | 0.015 | Obese down vs Overweight | 4.21 | 0.34 | 4.67 | 0.05 |

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| MIR4797 | microRNA 4797 | -1.53 | 0.041 | Obese down vs Overweight | 2.53 | 0.40 | 3.28 | 0.42 |
| GABRA3 | gamma-aminobutyric acid (GABA) A receptor, alpha 3 | -1.54 | 0.035 | Obese down vs Overweight | 4.38 | 0.39 | 4.91 | 0.13 |
| MIR4650-1 | microRNA 4650-1 | -1.54 | 0.019 | Obese down vs Overweight | 3.53 | 0.41 | 3.83 | 0.14 |
| CX3CR1 | chemokine (C-X3-C motif) receptor 1 | -1.54 | 0.010 | Obese down vs Overweight | 5.41 | 0.31 | 5.97 | 0.34 |
| OR5F1 | olfactory receptor, family 5, subfamily F, member 1 | -1.56 | 0.009 | Obese down vs Overweight | 4.25 | 0.29 | 4.88 | 0.37 |
| LINC01000 | long intergenic non-protein coding RNA 1000 | -1.56 | 0.037 | Obese down vs Overweight | 5.92 | 0.44 | 6.36 | 0.10 |
| CRX | cone-rod homeobox | -1.57 | 0.001 | Obese down vs Overweight | 4.67 | 0.27 | 5.08 | 0.22 |
| MICAL2 | microtubule associated monooxygenase, calponin and LIM domain containing 2 | -1.59 | 0.020 | Obese down vs Overweight | 6.11 | 0.36 | 6.73 | 0.30 |
| LINC01088 | long intergenic non-protein coding RNA 1088 | -1.60 | 0.049 | Obese down vs Overweight | 4.03 | 0.50 | 4.41 | 0.11 |
| ARL17A | ADP-ribosylation factor like GTPase 17A | -1.61 | 0.022 | Obese down vs Overweight | 7.08 | 0.40 | 7.52 | 0.49 |
| IGKV1D-17 | immunoglobulin kappa variable 1D-17 | -1.61 | 0.027 | Obese down vs Overweight | 3.62 | 0.38 | 4.24 | 0.40 |
| MIR548X | microRNA 548x | -1.61 | 0.006 | Obese down vs Overweight | 2.01 | 0.29 | 2.46 | 0.65 |
| HOXD10 | homeobox D10 | -1.62 | 0.021 | Obese down vs Overweight | 6.07 | 0.40 | 6.52 | 0.35 |
| MIR4280 | microRNA 4280 | -1.62 | 0.026 | Obese down vs Overweight | 2.96 | 0.41 | 3.40 | 0.45 |
| FAM21C | family with sequence similarity 21, member C | -1.65 | 0.001 | Obese down vs Overweight | 4.81 | 0.27 | 5.37 | 0.20 |
| TRDJ4 | T cell receptor delta joining 4 | -1.65 | 0.004 | Obese down vs Overweight | 1.93 | 0.31 | 2.43 | 0.51 |
| IGHA1 | immunoglobulin heavy constant alpha 1 | -1.70 | 0.028 | Obese down vs Overweight | 4.55 | 0.44 | 5.21 | 0.37 |
| OR52N5 | olfactory receptor, family 52, subfamily N, member 5 | -1.71 | 0.039 | Obese down vs Overweight | 3.43 | 0.51 | 3.99 | 0.35 |
| PRAMEF4 | PRAME family member 4 | -1.74 | 0.006 | Obese down vs Overweight | 3.76 | 0.33 | 4.57 | 0.42 |
| ROR1-AS1 | ROR1 antisense RNA 1 | -1.75 | 0.001 | Obese down vs Overweight | 4.00 | 0.32 | 4.60 | 0.27 |
| GAP43 | growth associated protein 43 | -1.75 | 0.030 | Obese down vs Overweight | 7.23 | 0.48 | 7.93 | 0.38 |
| MIR514B | microRNA 514b | -1.76 | 0.042 | Obese down vs Overweight | 2.31 | 0.54 | 2.85 | 0.43 |
| MIR320E | microRNA 320e | -1.78 | 0.033 | Obese down vs Overweight | 4.01 | 0.65 | 4.40 | 0.17 |
| GRAMD1B | GRAM domain containing 1B | -1.80 | 0.001 | Obese down vs Overweight | 4.20 | 0.31 | 4.91 | 0.13 |
| SNORA71B | small nucleolar RNA, H | -1.89 | 0.010 | Obese down vs Overweight | 4.39 | 0.45 | 5.22 | 0.41 |
| TRAV26-2 | T cell receptor alpha variable 26-2 | -1.89 | 0.019 | Obese down vs Overweight | 2.77 | 0.45 | 3.44 | 0.94 |
| OR2J3 | olfactory receptor, family 2, subfamily J, member 3 | -1.91 | 0.041 | Obese down vs Overweight | 2.72 | 0.59 | 3.58 | 0.32 |
| PLEKHS1 | pleckstrin homology domain containing, family S member 1 | -1.91 | 0.034 | Obese down vs Overweight | 4.40 | 0.55 | 5.51 | 0.62 |
| LINC01388 | long intergenic non-protein coding RNA 1388 | -1.96 | 0.035 | Obese down vs Overweight | 4.42 | 0.71 | 4.93 | 0.21 |
| ACTR5 | ARP5 actin-related protein 5 homolog (yeast) | -2.00 | 0.014 | Obese down vs Overweight | 3.04 | 0.47 | 3.87 | 0.73 |
| OR2M3 | olfactory receptor, family 2, subfamily M, member 3 | -2.04 | 0.003 | Obese down vs Overweight | 3.97 | 0.45 | 4.82 | 0.22 |
| MIR548I2 | microRNA 548i-2 | -2.31 | 0.033 | Obese down vs Overweight | 6.88 | 0.77 | 7.73 | 0.32 |

*Multiple test correction performed using the Benjamini-Hochberg step-up procedure to control the false discovery rate at alpha = 0.05. SD = standard deviation