**Supplementary Table 1. List of genes upregulated in OC+SM mice compared with their expression in OC mice.**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|

|  |  |  |  |
| --- | --- | --- | --- |
| **Gene\_Symbol** | **Gene\_ID** | **OC+SM vs OC.fc** | **P-value** |
| **Lgals12** | lectin, galactose binding, soluble 12 | 3.730 | 0.016 |
| **Ttll10** | tubulin tyrosine ligase-like family, member 10 | 3.613 | 0.028 |
| **Tmem229a** | transmembrane protein 229A | 3.458 | 0.031 |
| **Gpr87** | G protein-coupled receptor 87 | 3.223 | 0.022 |
| **Slc39a2** | solute carrier family 39 (zinc transporter), member 2 | 3.121 | 0.021 |
| **Mucl1** | mucin-like 1 | 2.988 | 0.017 |
| **Cyp27b1** | cytochrome P450, family 27, subfamily b, polypeptide 1 | 2.909 | 0.050 |
| **A530016L24Rik** | RIKEN cDNA A530016L24 gene | 2.839 | 0.025 |
| **Ocstamp** | osteoclast stimulatory transmembrane protein | 2.833 | 0.007 |
| **Prss41** | protease, serine 41 | 2.799 | 0.037 |
| **1700012D14Rik** | RIKEN cDNA 1700012D14 gene | 2.785 | 0.006 |
| **Spta1** | spectrin alpha, erythrocytic 1 | 2.743 | 0.008 |
| **Zc3h12d** | zinc finger CCCH type containing 12D | 2.676 | 0.036 |
| **Ankrd1** | ankyrin repeat domain 1 (cardiac muscle) | 2.675 | 0.028 |
| **Il1rapl1** | interleukin 1 receptor accessory protein-like 1 | 2.650 | 0.048 |
| **Gfap** | glial fibrillary acidic protein | 2.645 | 0.024 |
| **Gm6792** | predicted gene 6792 | 2.546 | 0.018 |
| **Ggt1** | gamma-glutamyltransferase 1 | 2.532 | 0.023 |
| **Slc15a2** | solute carrier family 15 (H+/peptide transporter), member 2 | 2.493 | 0.012 |
| **Serpinb6e** | serine (or cysteine) peptidase inhibitor, clade B, member 6e | 2.475 | 0.041 |
| **Olah** | oleoyl-ACP hydrolase | 2.470 | 0.018 |
| **Gm4832** | predicted gene 4832 | 2.465 | 0.007 |
| **Xrra1** | X-ray radiation resistance associated 1 | 2.448 | 0.001 |
| **Slitrk5** | SLIT and NTRK-like family, member 5 | 2.437 | 0.036 |
| **4921511I17Rik** | RIKEN cDNA 4921511I17 gene | 2.423 | 0.027 |
| **Slfn5os** | schlafen 5, opposite strand | 2.423 | 0.014 |
| **2210404O09Rik** | RIKEN cDNA 2210404O09 gene | 2.411 | 0.000 |
| **4833412C05Rik** | RIKEN cDNA 4833412C05 gene | 2.404 | 0.015 |
| **Lzts1** | leucine zipper, putative tumor suppressor 1 | 2.363 | 0.010 |
| **Medag** | mesenteric estrogen dependent adipogenesis | 2.356 | 0.010 |
| **Ddx3y** | DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, Y-linked | 2.347 | 0.003 |
| **Ptpro** | protein tyrosine phosphatase, receptor type, O | 2.329 | 0.037 |
| **Tmem117** | transmembrane protein 117 | 2.297 | 0.002 |
| **Gm16796** | predicted gene, 16796 | 2.283 | 0.037 |
| **Nwd1** | NACHT and WD repeat domain containing 1 | 2.268 | 0.035 |
| **1700125H20Rik** | RIKEN cDNA 1700125H20 gene | 2.264 | 0.004 |
| **AF357359** | snoRNA AF357359 | 2.264 | 0.011 |
| **Duxbl1** | double homeobox B-like 1 | 2.258 | 0.031 |
| **1700012C14Rik** | RIKEN cDNA 1700012C14 gene | 2.223 | 0.048 |
| **Muc19** | mucin 19 | 2.218 | 0.003 |
| **Gstm3** | glutathione S-transferase, mu 3 | 2.192 | 0.005 |
| **Gm2694** | predicted gene 2694 | 2.171 | 0.043 |
| **Gm12596** | predicted gene 12596 | 2.158 | 0.015 |
| **Klhl32** | kelch-like 32 | 2.153 | 0.032 |
| **Sprr2a2** | small proline-rich protein 2A2 | 2.146 | 0.022 |
| **Prtn3** | proteinase 3 | 2.126 | 0.010 |
| **Rhd** | Rh blood group, D antigen | 2.122 | 0.049 |
| **Aldob** | aldolase B, fructose-bisphosphate | 2.077 | 0.049 |
| **Apod** | apolipoprotein D | 2.072 | 0.035 |
| **Teddm1b** | transmembrane epididymal protein 1B | 2.061 | 0.014 |
| **Cd55b** | CD55 molecule, decay accelerating factor for complement B | 2.055 | 0.015 |
| **1700092M07Rik** | RIKEN cDNA 1700092M07 gene | 2.048 | 0.041 |
| **Tmem215** | transmembrane protein 215 | 2.033 | 0.004 |
| **4921507L20Rik** | RIKEN cDNA 4921507L20 gene | 2.029 | 0.000 |
| **Gm20362** | predicted gene, 20362 | 2.023 | 0.014 |
| **Rbm20** | RNA binding motif protein 20 | 2.013 | 0.000 |
| **Tnfrsf22** | tumor necrosis factor receptor superfamily, member 22 | 2.005 | 0.023 |
| **Arhgap8** | Rho GTPase activating protein 8 | 1.997 | 0.029 |
| **Cutal** | cutA divalent cation tolerance homolog-like | 1.994 | 0.043 |
| **6430531B16Rik** | RIKEN cDNA 6430531B16 gene | 1.993 | 0.049 |
| **Gm8709** | predicted gene 8709 | 1.990 | 0.028 |
| **Fam159a** | family with sequence similarity 159, member A | 1.972 | 0.030 |
| **Egf** | epidermal growth factor | 1.968 | 0.004 |
| **Gm5779** | predicted gene 5779 | 1.968 | 0.026 |
| **Lmntd2** | lamin tail domain containing 2 | 1.960 | 0.027 |
| **Olr1** | oxidized low density lipoprotein (lectin-like) receptor 1 | 1.939 | 0.047 |
| **Npy** | neuropeptide Y | 1.929 | 0.031 |
| **F3** | coagulation factor III | 1.904 | 0.040 |
| **4933408J17Rik** | RIKEN cDNA 4933408J17 gene | 1.902 | 0.041 |
| **Cdh13** | cadherin 13 | 1.892 | 0.036 |
| **Hamp2** | hepcidin antimicrobial peptide 2 | 1.885 | 0.049 |
| **Rasgrf2** | RAS protein-specific guanine nucleotide-releasing factor 2 | 1.841 | 0.030 |
| **Slitrk1** | SLIT and NTRK-like family, member 1 | 1.840 | 0.017 |
| **Zfand4** | zinc finger, AN1-type domain 4 | 1.832 | 0.016 |
| **Rasgrf1** | RAS protein-specific guanine nucleotide-releasing factor 1 | 1.831 | 0.034 |
| **Tceal6** | transcription elongation factor A (SII)-like 6 | 1.821 | 0.034 |
| **Agxt2** | alanine-glyoxylate aminotransferase 2 | 1.819 | 0.049 |
| **Gcg** | glucagon | 1.818 | 0.035 |
| **Prdm8** | PR domain containing 8 | 1.789 | 0.044 |
| **Aqp7** | aquaporin 7 | 1.783 | 0.008 |
| **Cml5** | Calmodulin-like protein 5 | 1.781 | 0.036 |
| **Gm8096** | predicted gene 8096 | 1.759 | 0.041 |
| **4933400C23Rik** | RIKEN cDNA 4933400C23 gene | 1.752 | 0.049 |
| **Lin28a** | lin-28 homolog A (C. elegans) | 1.742 | 0.037 |
| **Gng8** | guanine nucleotide binding protein (G protein), gamma 8 | 1.734 | 0.002 |
| **Elovl2** | elongation of very long chain fatty acids (FEN1/Elo2, SUR4/Elo3, yeast)-like 2 | 1.733 | 0.041 |
| **Unc5d** | unc-5 netrin receptor D | 1.726 | 0.039 |
| **Acot4** | acyl-CoA thioesterase 4 | 1.706 | 0.035 |
| **Snap91** | synaptosomal-associated protein 91 | 1.705 | 0.041 |
| **Ndrg4** | N-myc downstream regulated gene 4 | 1.694 | 0.014 |
| **Gpr37** | G protein-coupled receptor 37 | 1.687 | 0.005 |
| **Nphs2** | nephrosis 2, podocin | 1.681 | 0.011 |
| **Hist4h4** | histone cluster 4, H4 | 1.668 | 0.036 |
| **2610035D17Rik** | RIKEN cDNA 2610035D17 gene | 1.655 | 0.014 |
| **Adh1** | alcohol dehydrogenase 1 (class I) | 1.648 | 0.032 |
| **Nipa1** | non imprinted in Prader-Willi/Angelman syndrome 1 homolog (human) | 1.647 | 0.047 |
| **Sectm1b** | secreted and transmembrane 1B | 1.633 | 0.036 |
| **Lrrc34** | leucine rich repeat containing 34 | 1.621 | 0.017 |
| **Tmem119** | transmembrane protein 119 | 1.616 | 0.035 |
| **Mks1** | Meckel syndrome, type 1 | 1.615 | 0.035 |
| **Ahsg** | alpha-2-HS-glycoprotein | 1.614 | 0.002 |
| **Cda** | cytidine deaminase | 1.598 | 0.007 |
| **Ppp1r3d** | protein phosphatase 1, regulatory subunit 3D | 1.588 | 0.002 |
| **Pdlim3** | PDZ and LIM domain 3 | 1.585 | 0.033 |
| **Sh3yl1** | Sh3 domain YSC-like 1 | 1.577 | 0.011 |
| **Fgfr2** | fibroblast growth factor receptor 2 | 1.575 | 0.012 |
| **Atp6v1c2** | ATPase, H+ transporting, lysosomal V1 subunit C2 | 1.564 | 0.028 |
| **Ren1** | renin 1 structural | 1.553 | 0.005 |
| **1700028K03Rik** | RIKEN cDNA 1700028K03 gene | 1.548 | 0.001 |
| **Raet1e** | retinoic acid early transcript 1E | 1.544 | 0.046 |
| **Maneal** | mannosidase, endo-alpha-like | 1.538 | 0.019 |
| **Map6** | microtubule-associated protein 6 | 1.536 | 0.034 |
| **Zbtb25** | zinc finger and BTB domain containing 25 | 1.534 | 0.000 |
| **Dnaic2** | dynein, axonemal, intermediate chain 2 | 1.521 | 0.026 |
| **Hsf4** | heat shock transcription factor 4 | 1.513 | 0.040 |
| **Perp** | PERP, TP53 apoptosis effector | 1.513 | 0.018 |
| **Gabra4** | gamma-aminobutyric acid (GABA) A receptor, subunit alpha 4 | 1.511 | 0.017 |
| **Mtm1** | X-linked myotubular myopathy gene 1 | 1.508 | 0.040 |
| **Abcg4** | ATP-binding cassette, sub-family G (WHITE), member 4 | 1.508 | 0.005 |
| **Hoxa7** | homeobox A7 | 1.506 | 0.018 |
| **Zfp647** | zinc finger protein 647 | 1.500 | 0.023 |
| **Galnt16** | UDP-N-acetyl-alpha-D-galactosamine:polypeptide N-acetylgalactosaminyltransferase 16 | 1.500 | 0.048 |

 |

Comparison of the OC and OC+SM mice data revealed 122 differentially upregulated genes with fold changes >1.5, and *P*< 0.05. OC: 40-week-old mice; OC+SM: 40-week-old mice orally administered Samul-tang.