

Table S1. List of differentially expressed genes (DEGs) in HFD versus PRF 50 Groups.

| Gene symbol | Description | Fold Change |
|---------------|---|-------------|
| 1810011O10Rik | RIKEN cDNA 1810011O10 gene | 0.452 |
| 2010003K11Rik | RIKEN cDNA 2010003K11 gene | 0.413 |
| Abcc3 | ATP-binding cassette, sub-family C (CFTR /MRP), member 3 | 0.494 |
| Abhd6 | abhydrolase domain containing 6 | 0.447 |
| Acaa1b | acetyl-Coenzyme A acyltransferase 1B | 0.301 |
| Acot1 | acyl-CoA thioesterase 1 | 0.186 |
| Acot3 | acyl-CoA thioesterase 3 | 0.054 |
| Acot4 | acyl-CoA thioesterase 4 | 0.213 |
| Acs11 | acyl-CoA synthetase long-chain family member 1 | 0.469 |
| Acss3 | acyl-CoA synthetase short-chain family member 3 | 0.191 |
| Aldh3a2 | aldehyde dehydrogenase family 3, subfamily A2 | 0.368 |
| Anxa2 | annexin A2 | 0.471 |
| Apoa4 | apolipoprotein A-IV | 0.230 |
| Aqp8 | aquaporin 8 | 0.460 |
| C1qa | complement component 1, q subcomponent, alpha polypeptide | 2.561 |
| C1qb | complement component 1, q subcomponent, beta polypeptide | 2.806 |
| C1qc | complement component 1, q subcomponent, C chain | 2.759 |
| C6 | complement component 6 | 3.971 |
| C8a | complement component 8, alpha polypeptide | 2.038 |
| C8b | complement component 8, beta polypeptide | 2.633 |
| C9 | complement component 9 | 2.002 |
| Car3 | carbonic anhydrase 3 | 0.385 |
| Cd36 | CD36 antigen | 0.185 |
| Cd52 | CD52 antigen | 2.238 |

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| Cd5l | CD5 antigen-like | 2.966 |
| Ces1d | carboxylesterase 1D | 0.358 |
| Ces1e | carboxylesterase 1E | 0.450 |
| Cfp | complement factor properdin | 2.713 |
| Cib3 | calcium and integrin binding family member 3 | 6.993 |
| Clec4f | C-type lectin domain family 4, member f | 2.512 |
| Crat | carnitine acetyltransferase | 0.359 |
| Csflr | colony stimulating factor 1 receptor | 2.601 |
| Ctss | cathepsin S | 2.328 |
| Cxcl1 | chemokine (C-X-C motif) ligand 1 | 3.012 |
| Cyba | cytochrome b-245, alpha polypeptide | 2.180 |
| Cyp1a2 | cytochrome P450, family 1, subfamily a, polypeptide 2 | 2.056 |
| Cyp2b9 | cytochrome P450, family 2, subfamily b, polypeptide 9 | 0.016 |
| Cyp2c38 | cytochrome P450, family 2, subfamily c, polypeptide 38 | 0.229 |
| Cyp3a11 | cytochrome P450, family 3, subfamily a, polypeptide 11 | 0.362 |
| Cyp3a59 | cytochrome P450, family 3, subfamily a, polypeptide 59 | 0.416 |
| Cyp4a10 | cytochrome P450, family 4, subfamily a, polypeptide 10 | 0.079 |
| Cyp4a12a | cytochrome P450, family 4, subfamily a, polypeptide 12a | 0.416 |
| Cyp4a14 | cytochrome P450, family 4, subfamily a, polypeptide 14 | 0.034 |
| Cyp7a1 | cytochrome P450, family 7, subfamily a, polypeptide 1 | 2.206 |
| Cyp7b1 | cytochrome P450, family 7, subfamily b, polypeptide 1 | 2.513 |
| Dnajc12 | DnaJ heat shock protein family (Hsp40) member C12 | 2.725 |
| Egfr | epidermal growth factor receptor | 3.365 |
| Ehhadh | enoyl-Coenzyme A, hydratase /3-hydroxyacyl Coenzyme A dehydrogenase | 0.484 |
| Eif4ebp3 | eukaryotic translation initiation factor 4E binding protein 3 | 2.243 |
| Elov15 | ELOVL family member 5, elongation of long chain fatty acids (yeast) | 0.456 |
| Enho | energy homeostasis associated | 5.905 |

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| Fabp2 | fatty acid binding protein 2, intestinal | 0.466 |
| Fabp5 | fatty acid binding protein 5, epidermal | 2.733 |
| Fabp7 | fatty acid binding protein 7, brain | 2.376 |
| Fcer1g | Fc receptor, IgE, high affinity I, gamma polypeptide | 2.224 |
| Fcna | ficolin A | 2.417 |
| Fgl1 | fibrinogen-like protein 1 | 3.077 |
| Fitm1 | fat storage-inducing transmembrane protein 1 | 0.439 |
| G0s2 | G0 /G1 switch gene 2 | 0.261 |
| G6pc | glucose-6-phosphatase, catalytic | 0.233 |
| Gm4952 | predicted gene 4952 | 0.488 |
| Gngt2 | guanine nucleotide binding protein (G protein), gamma transducing activity polypeptide 2 | 2.152 |
| Gstp1 | glutathione S-transferase, pi 1 | 4.350 |
| Hamp2 | hepcidin antimicrobial peptide 2 | 2.207 |
| Hhex | hematopoietically expressed homeobox | 2.049 |
| Hmox1 | heme oxygenase 1 | 2.882 |
| Hp | haptoglobin | 2.166 |
| Hpx | hemopexin | 2.303 |
| Hsd3b5 | hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 5 | 6.441 |
| Ifi27l2a | interferon, alpha-inducible protein 27 like 2A | 2.697 |
| Inhbe | inhibin beta-E | 0.438 |
| Lbp | lipopolysaccharide binding protein | 2.237 |
| Lcn2 | lipocalin 2 | 13.831 |
| Lgals1 | lectin, galactose binding, soluble 1 | 0.251 |
| Lgm1 | legumain | 2.117 |
| Lrg1 | leucine-rich alpha-2-glycoprotein 1 | 2.364 |
| Lst1 | leukocyte specific transcript 1 | 2.038 |

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| Ly6e | lymphocyte antigen 6 complex, locus E | 2.269 |
| Lyz2 | lysozyme 2 | 2.518 |
| Marco | macrophage receptor with collagenous structure | 9.314 |
| Me1 | malic enzyme 1, NADP(+)-dependent, cytosolic | 0.298 |
| Mfsd2a | major facilitator superfamily domain containing 2A | 0.369 |
| Mme | membrane metallo endopeptidase | 0.356 |
| Moxd1 | monooxygenase, DBH-like 1 | 21.842 |
| Mpeg1 | macrophage expressed gene 1 | 2.501 |
| Mup20 | major urinary protein 20 | 2.552 |
| Orm2 | orosomucoid 2 | 17.617 |
| Paqr7 | progesterone and adiponectin receptor family member VII | 0.469 |
| Pex11a | peroxisomal biogenesis factor 11 alpha | 0.292 |
| Pklr | pyruvate kinase liver and red blood cell | 0.442 |
| Pla2g6 | phospholipase A2, group VI | 0.473 |
| Plin2 | . | 0.351 |
| Ppp1r3b | protein phosphatase 1, regulatory (inhibitor) subunit 3B | 0.443 |
| Rdh16 | retinol dehydrogenase 16 | 0.407 |
| Retsat | retinol saturase (all trans retinol 13,14 reductase) | 0.394 |
| Rgs16 | regulator of G-protein signaling 16 | 0.464 |
| Rnase4 | ribonuclease, RNase A family 4 | 2.098 |
| Saa1 | serum amyloid A 1 | 12.793 |
| Saa2 | serum amyloid A 2 | 11.592 |
| Sdc3 | syndecan 3 | 2.754 |
| Selenbp2 | selenium binding protein 2 | 10.672 |
| Serpina1e | serine (or cysteine) peptidase inhibitor, clade A, member 1E | 15.511 |
| Slc16a7 | solute carrier family 16 (monocarboxylic acid transporters), member 7 | 0.459 |
| Slc25a25 | solute carrier family 25 (mitochondrial carrier, phosphate carrier), member 25 | 0.499 |

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| Slc25a47 | solute carrier family 25, member 47 | 0.425 |
| Slc3a1 | solute carrier family 3, member 1 | 2.696 |
| Steap4 | STEAP family member 4 | 2.208 |
| Tceal8 | transcription elongation factor A (SII)-like 8 | 0.472 |
| Tff3 | trefoil factor 3, intestinal | 19.510 |
| Thrsp | thyroid hormone responsive | 0.262 |
| Tsc22d1 | TSC22 domain family, member 1 | 0.442 |
| Tsku | tsukushi, small leucine rich proteoglycan | 0.444 |
| Txnip | thioredoxin interacting protein | 0.484 |
| Tyrobp | TYRO protein tyrosine kinase binding protein | 2.174 |
| Vnn1 | vanin 1 | 0.317 |
| Vsig4 | V-set and immunoglobulin domain containing 4 | 2.383 |
| Wfdc17 | WAP four-disulfide core domain 17 | 2.242 |
