Supplementary Table 1: List of differentially expressed genes during Energy Restriction, Weight Stabilization and Dietary Intervention.

Gene Symbol	Gene Name	SAM score	Fold Change
Energy Restriction (ER)	***Down regulated genes***		
ELOVL5	Elovl Family Member 5, Elongation Of Long Chain Fatty Acids (Fen1/Elo2, Sur4/Elo3-Like, Yeast)	-5.74	0.70
DGAT2	Diacylglycerol O-Acyltransferase Homolog 2 (Mouse)	-5.41	0.62
FMOD	Fibromodulin	-5.39	0.61
ALDOC	Aldolase C, Fructose-Bisphosphate	-5.33	0.59
DGAT2	Diacylglycerol O-Acyltransferase Homolog 2 (Mouse)	-5.22	0.59
LGALS12	Lectin, Galactoside-Binding, Soluble, 12 (Galectin 12)	-5.17	0.69
NMB	Neuromedin B	-5.04	0.68
FADS2	Fatty Acid Desaturase 2	-4.80	0.44
THBS4	Thrombospondin 4	-4.69	0.55
AACS	Acetoacetyl-Coa Synthetase	-4.53	0.69
HP	Haptoglobin	-4.52	0.37
PTPLB	Protein Tyrosine Phosphatase-Like (Proline Instead Of Catalytic Arginine), Member B	-4.48	0.72
LOX	Lysyl Oxidase	-4.43	0.78
MXRA5	Matrix-Remodelling Associated 5	-4.43	0.63
DHCR24	24-Dehydrocholesterol Reductase	-4.38	0.74
LOX	Lysyl Oxidase	-4.26	0.78
ACSL1	Fatty-Acid-Coenzyme A Ligase, Long-Chain 1	-4.23	0.71
MME	Membrane Metallo-Endopeptidase (Neutral Endopeptidase, Enkephalinase, Calla, Cd10)	-4.20	0.71
GLYAT	Glycine-N-Acyltransferase	-4.13	0.79
MYCBP	C-Myc Binding Protein	-4.11	0.78
LOC55908	Hepatocellular Carcinoma-Associated Gene Td26	-4.09	0.51
SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	-4.05	0.66
CKMT2	Creatine Kinase, Mitochondrial 2 (Sarcomeric)	-4.04	0.74
SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	-4.04	0.42
AQP1	Aquaporin 1 (Colton Blood Group)	-3.96	0.73
COMP	Cartilage Oligomeric Matrix Protein	-3.93	0.61
PRDX2	Peroxiredoxin 2	-3.92	0.77
PPAP2A	Phosphatidic Acid Phosphatase Type 2a	-3.91	0.80
ECHDC1	Enoyl Coenzyme A Hydratase Domain Containing 1	-3.87	0.68
ATP2B4	Atpase, Ca++ Transporting, Plasma Membrane 4	-3.80	0.85
CES1	Carboxylesterase 1 (Monocyte/Macrophage Serine Esterase 1)	-3.67	0.70
A_24_P272713	-	-3.64	0.75
HIST1H1C	Histone 1, H1c	-3.61	0.74
LOX	Lysyl Oxidase	-3.59	0.80
CXCL9	Chemokine (C-X-C Motif) Ligand 9	-3.56	0.82
SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	-3.56	0.45

MGC4399	Pnc1 Protein	-3.55	0.78
GLYAT	Glycine-N-Acyltransferase	-3.55	0.76
MGC4172	Short-Chain Dehydrogenase/Reductase	-3.54	0.81
LOX	Lysyl Oxidase	-3.53	0.80
C19orf32	-	-3.51	0.76
LOC389393	-	-3.51	0.77
LDHD	Lactate Dehydrogenase D	-3.50	0.81
IDH1	Isocitrate Dehydrogenase 1 (Nadp+), Soluble	-3.48	0.78
CDO1	Cysteine Dioxygenase, Type I	-3.48	0.76
PRDX2	Peroxiredoxin 2	-3.48	0.81
A_24_P609932	-	-3.47	0.84
LOC152831	-	-3.47	0.72
LOC152831	-	-3.46	0.72
C22orf16	Chromosome 22 Open Reading Frame 16	-3.44	0.76
LOX	Lysyl Oxidase	-3.43	0.79
GCSH	Glycine Cleavage System Protein H (Aminomethyl Carrier)	-3.43	0.79
IDH2	Isocitrate Dehydrogenase 2 (Nadp+), Mitochondrial	-3.42	0.80
ACAS2	Acyl-CoA synthetase short-chain family member 2	-3.41	0.81
CICE	Cell Death-Inducing Cide-Like Effector Pseudogene	-3.41	0.78
BZRP	Benzodiazapine Receptor (Peripheral)	-3.39	0.75
MGC35097	-	-3.37	0.76
NDUFB3	Nadh Dehydrogenase (Ubiquinone) 1 Beta Subcomplex, 3, 12kda	-3.35	0.81
SELENBP1	Selenium Binding Protein 1	-3.35	0.78
TF	Transferrin	-3.34	0.78
THC2304000	-	-3.34	0.82
AGT	Angiotensinogen (Serpin Peptidase Inhibitor, Clade A, Member 8)	-3.34	0.79
ME1	Malic Enzyme 1, Nadp(+)-Dependent, Cytosolic	-3.34	0.79
PGM1	Phosphoglucomutase 1	-3.33	0.80
LOX	Lysyl Oxidase	-3.33	0.81
BENE	Mal, T-cell differentiation protein-like	-3.33	0.82
LOX	Lysyl Oxidase	-3.33	0.80
AMOT	Angiomotin	-3.31	0.79
A_32_P127454	-	-3.31	0.81
C20orf7	Chromosome 20 Open Reading Frame 7	-3.30	0.73
PDHA1	Pyruvate Dehydrogenase (Lipoamide) Alpha 1	-3.28	0.79
DECR1	2,4-Dienoyl Coa Reductase 1, Mitochondrial	-3.27	0.82
AQP1	Aquaporin 1 (Colton Blood Group)	-3.27	0.76
CDKN2C	Cyclin-Dependent Kinase Inhibitor 2c (P18, Inhibits Cdk4)	-3.27	0.77
THC2373940	-	-3.26	0.74
DOCK6	Dedicator Of Cytokinesis 6	-3.24	0.79
GYS1	Glycogen Synthase 1 (Muscle)	-3.21	0.79
A_24_P608790	-	-3.20	0.80
CSTA	Cystatin A (Stefin A)	-3.18	0.77

GAPDH	Glyceraldehyde-3-Phosphate Dehydrogenase	-3.17	0.81
LAIR1	Leukocyte-Associated Ig-Like Receptor 1	-3.16	0.81
MRPL19	Mitochondrial Ribosomal Protein L19	-3.15	0.84
UQCRH	Ubiquinol-Cytochrome C Reductase Hinge Protein	-3.14	0.81
THC2271174	-	-3.14	0.82
ENST00000333415	-	-3.13	0.79
ENST00000326308	-	-3.12	0.84
ZAP128	Acyl-CoA thioesterase 2	-3.12	0.83
LOX	Lysyl Oxidase	-3.10	0.80
LOC388305	-	-3.10	0.80
DDT	D-Dopachrome Tautomerase	-3.08	0.83
CCND1	Cyclin D1	-3.08	0.79
TMEM14B	Transmembrane Protein 14b	-3.06	0.83
PCDH12	Protocadherin 12	-3.04	0.85
MTCH2	Mitochondrial Carrier Homolog 2 (C. Elegans)	-3.04	0.78
S100B	S100 Calcium Binding Protein, Beta (Neural)	-3.03	0.74
A_23_P170713	-	-3.03	0.80
ICAM3	Intercellular Adhesion Molecule 3	-3.03	0.81
CDH13	Cadherin 13, H-Cadherin (Heart)	-3.03	0.76
LOC152831	-	-3.02	0.77
UQCRH	Ubiquinol-Cytochrome C Reductase Hinge Protein	-3.02	0.80
FAM14B	Family With Sequence Similarity 14, Member B	-3.02	0.85
MMP15	Matrix Metallopeptidase 15 (Membrane-Inserted)	-3.02	0.80
LOC92162	-	-3.02	0.76
LOXL2	Lysyl Oxidase-Like 2	-3.01	0.81
MECR	Mitochondrial Trans-2-Enoyl-Coa Reductase	-3.01	0.77
CR609146	-	-3.00	0.78
ADRBK2	Adrenergic, Beta, Receptor Kinase 2	-3.00	0.79
PC4	Activated RNA polymerase II transcription cofactor 4	-2.99	0.83
RNF141	Ring Finger Protein 141	-2.98	0.81
PPIL1	Peptidylprolyl Isomerase (Cyclophilin)-Like 1	-2.98	0.82
LAMB3	Laminin, Beta 3	-2.98	0.73
C14orf147	Chromosome 14 Open Reading Frame 147	-2.97	0.87
ATP5B	Atp Synthase, H+ Transporting, Mitochondrial F1 Complex, Beta Polypeptide	-2.97	0.85
AK092810	-	-2.94	0.82
LOX	Lysyl Oxidase	-2.92	0.80
SAA4	Serum Amyloid A4, Constitutive	-2.92	0.72
ABCC6	Atp-Binding Cassette, Sub-Family C (Cftr/Mrp), Member 6	-2.91	0.73
POP5	Processing Of Precursor 5, Ribonuclease P/Mrp Subunit (S. Cerevisiae)	-2.91	0.84
ALDH9A1	Aldehyde Dehydrogenase 9 Family, Member A1	-2.87	0.79
RetSat	All-Trans-13,14-Dihydroretinol Saturase	-2.87	0.80
ENST00000314088	-	-2.86	0.80
A_24_P32735	-	-2.85	0.84

RDH5	Retinol Dehydrogenase 5 (11-Cis And 9-Cis)	-2.85	0.81
ANKRD38	Ankyrin Repeat Domain 38	-2.84	0.78
SLC16A7	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 7	-2.84	0.83
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.83	0.76
NDUFS1	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 1, 75kda (Nadh-Coenzyme Q Reductase)	-2.83	0.86
ACO2	Aconitase 2, Mitochondrial	-2.82	0.85
PHGDH	Phosphoglycerate Dehydrogenase	-2.82	0.74
HIBCH	3-Hydroxyisobutyryl-Coenzyme A Hydrolase	-2.79	0.86
LOXL2	Lysyl Oxidase-Like 2	-2.79	0.83
OXCT1	3-Oxoacid Coa Transferase 1	-2.79	0.82
LOX	Lysyl Oxidase	-2.79	0.81
MYEOV	Myeloma Overexpressed Gene (In A Subset Of T(11;14) Positive Multiple Myelomas)	-2.79	0.80
FLJ22104	-	-2.79	0.84
THC2440787	-	-2.78	0.86
PC4	SUB1 homolog (S. cerevisiae)	-2.78	0.82
HIG1	HIG1 domain family, member 1A	-2.78	0.83
TRIM6	Tripartite Motif-Containing 6	-2.77	0.86
ACO2	Aconitase 2, Mitochondrial	-2.77	0.84
LAIR1	Leukocyte-Associated Ig-Like Receptor 1	-2.77	0.83
A_24_P631993	-	-2.76	0.84
LOXL2	Lysyl Oxidase-Like 2	-2.76	0.82
ALAD	Aminolevulinate, Delta-, Dehydratase	-2.76	0.86
ACAD9	Acyl-Coenzyme A Dehydrogenase Family, Member 9	-2.75	0.83
TSFM	Ts Translation Elongation Factor, Mitochondrial	-2.74	0.87
PDCD8	Programmed Cell Death 8 (Apoptosis-Inducing Factor)	-2.74	0.85
FAM36A	Family With Sequence Similarity 36, Member A	-2.74	0.86
NDUFAB1	Nadh Dehydrogenase (Ubiquinone) 1, Alpha/Beta Subcomplex, 1, 8kda	-2.74	0.85
SAA4	Serum Amyloid A4, Constitutive	-2.74	0.72
GLRX2	Glutaredoxin 2	-2.74	0.82
FH	Fumarate Hydratase	-2.73	0.86
ENC1	Ectodermal-Neural Cortex (With Btb-Like Domain)	-2.72	0.84
SAA4	Serum Amyloid A4, Constitutive	-2.72	0.74
DECR1	2,4-Dienoyl Coa Reductase 1, Mitochondrial	-2.72	0.82
PDXK	Pyridoxal (Pyridoxine, Vitamin B6) Kinase	-2.72	0.77
ECHS1	Enoyl Coenzyme A Hydratase, Short Chain, 1, Mitochondrial	-2.71	0.82
SAA4	Serum Amyloid A4, Constitutive	-2.71	0.73
A_32_P133926	-	-2.70	0.75
BOLA3	Bola-Like 3 (E. Coli)	-2.70	0.87
NDUFB2	Nadh Dehydrogenase (Ubiquinone) 1 Beta Subcomplex, 2, 8kda	-2.69	0.83
GPSN2	Glycoprotein, Synaptic 2	-2.69	0.85

ALDOAP2	Aldolase A, Fructose-Bisphosphate Pseudogene 2	-2.69	0.82
LOXL2	Lysyl Oxidase-Like 2	-2.68	0.82
LOXL2	Lysyl Oxidase-Like 2	-2.67	0.82
RASSF4	Ras Association (Ralgds/Af-6) Domain Family 4	-2.67	0.83
LOXL2	Lysyl Oxidase-Like 2	-2.67	0.80
SULT1A2	Sulfotransferase Family, Cytosolic, 1a, Phenol-Preferring, Member 2	-2.67	0.81
C1orf122	Chromosome 1 Open Reading Frame 122	-2.67	0.86
ENST00000321482	-	-2.67	0.86
DECR2	2,4-Dienoyl Coa Reductase 2, Peroxisomal	-2.66	0.86
AK098185	-	-2.65	0.88
SFRP2	Secreted Frizzled-Related Protein 2	-2.65	0.66
SURF4	Surfeit 4	-2.64	0.86
UCRC	Ubiquinol-Cytochrome C Reductase Complex (7.2 Kd)	-2.63	0.86
ZNF406	Zinc Finger Protein 406	-2.63	0.79
C1orf102	Chromosome 1 Open Reading Frame 102	-2.63	0.85
A_24_P324074	-	-2.63	0.87
LOC148898	Hypothetical Protein Bc007899	-2.63	0.82
TMEM14C	Transmembrane Protein 14c	-2.62	0.88
ETFDH	Electron-Transferring-Flavoprotein Dehydrogenase	-2.61	0.86
ARL6IP5	Adp-Ribosylation-Like Factor 6 Interacting Protein 5	-2.60	0.88
A_23_P120644	-	-2.60	0.84
CYBASC3	Cytochrome B, Ascorbate Dependent 3	-2.60	0.86
THC2275899	-	-2.60	0.84
TRIM6	Tripartite Motif-Containing 6	-2.59	0.85
UQCRFS1	Ubiquinol-Cytochrome C Reductase, Rieske Iron-Sulfur Polypeptide 1	-2.59	0.87
PC4	SUB1 homolog (S. cerevisiae)	-2.59	0.82
IMPA3	Inositol monophosphatase domain containing 1	-2.58	0.84
FAM14B	Family With Sequence Similarity 14, Member B	-2.58	0.87
MRAS	Muscle Ras Oncogene Homolog	-2.58	0.87
LOXL2	Lysyl Oxidase-Like 2	-2.58	0.82
FAM82C	Family With Sequence Similarity 82, Member C	-2.57	0.84
C20orf3	Chromosome 20 Open Reading Frame 3	-2.56	0.87
ADPRHL1	Adp-Ribosylhydrolase Like 1	-2.56	0.86
CYB5	Cytochrome b5 type A (microsomal)	-2.55	0.88
ATP5A1	Atp Synthase, H+ Transporting, Mitochondrial F1 Complex, Alpha Subunit 1, Cardiac Muscle	-2.55	0.85
THC2403797	-	-2.55	0.82
TNC	Tenascin C (Hexabrachion)	-2.55	0.76
MRPS15	Mitochondrial Ribosomal Protein S15	-2.55	0.87
MGC35097	-	-2.55	0.82
CCNL2	Cyclin L2	-2.55	0.85
MGC23909	Hypothetical Protein Mgc23909	-2.54	0.86
LOXL2	Lysyl Oxidase-Like 2	-2.54	0.83

COX7A1	Cytochrome C Oxidase Subunit Viia Polypeptide 1 (Muscle)	-2.53	0.89
A_24_P213034	-	-2.53	0.86
NQO2	Nad(P)H Dehydrogenase, Quinone 2	-2.53	0.86
LOXL2	Lysyl Oxidase-Like 2	-2.53	0.82
SHMT1	Serine Hydroxymethyltransferase 1 (Soluble)	-2.53	0.88
CR591849	-	-2.53	0.83
DUSP14	Dual Specificity Phosphatase 14	-2.53	0.84
PPP1R1B	Protein Phosphatase 1, Regulatory (Inhibitor) Subunit 1b (Dopamine And Camp Regulated Phosphoprotein, Darpp-32)	-2.52	0.81
THC2373712	-	-2.52	0.80
UQCRFS1	Ubiquinol-Cytochrome C Reductase, Rieske Iron-Sulfur Polypeptide 1	-2.52	0.87
CLU	Clusterin	-2.51	0.85
LDHA	Lactate Dehydrogenase A	-2.51	0.84
CA421315	-	-2.50	0.82
SLC7A4	Solute Carrier Family 7 (Cationic Amino Acid Transporter, Y+ System), Member 4	-2.49	0.81
AK1	Adenylate Kinase 1	-2.48	0.84
PTD015	Ptd015 Protein	-2.48	0.85
BF373107	-	-2.48	0.86
A_24_P177634	-	-2.47	0.87
GAMT	Guanidinoacetate N-Methyltransferase	-2.47	0.87
DPP3	Dipeptidyl-Peptidase 3	-2.47	0.85
C1orf122	Chromosome 1 Open Reading Frame 122	-2.47	0.86
MGC23909	Hypothetical Protein Mgc23909	-2.46	0.86
TIMM8B	Translocase Of Inner Mitochondrial Membrane 8 Homolog B (Yeast)	-2.46	0.85
QDPR	Quinoid Dihydropteridine Reductase	-2.46	0.83
PON2	Paraoxonase 2	-2.46	0.87
INSIG1	Insulin Induced Gene 1	-2.46	0.85
QP-C	Ubiquinol-cytochrome c reductase, complex III subunit VII, 9.5kDa	-2.46	0.86
GHITM	Growth Hormone Inducible Transmembrane Protein	-2.45	0.85
LOXL2	Lysyl Oxidase-Like 2	-2.45	0.83
DLAT	Dihydrolipoamide S-Acetyltransferase (E2 Component Of Pyruvate Dehydrogenase Complex)	-2.45	0.86
AGPAT3	1-Acylglycerol-3-Phosphate O-Acyltransferase 3	-2.44	0.88
FLJ25530	Hepatocyte Cell Adhesion Molecule	-2.43	0.86
ENST00000307662	-	-2.43	0.84
ENST00000295608	-	-2.43	0.83
PLEKHG5	Pleckstrin Homology Domain Containing, Family G (With Rhogef Domain) Member 5	-2.43	0.83
RTN3	Reticulon 3	-2.43	0.88
FLJ25530	Hepatocyte Cell Adhesion Molecule	-2.42	0.83
MRPS25	Mitochondrial Ribosomal Protein S25	-2.42	0.85
C8orf4	Chromosome 8 Open Reading Frame 4	-2.41	0.86
THC2437037	-	-2.41	0.85

TUBA8	Tubulin, Alpha 8	-2.40	0.80
CHP	Calcium Binding Protein P22	-2.40	0.86
FLJ39421	-	-2.40	0.87
CB111670	-	-2.40	0.86
SAA4	Serum Amyloid A4, Constitutive	-2.39	0.75
ATP5J2	Atp Synthase, H+ Transporting, Mitochondrial F0 Complex, Subunit F2	-2.38	0.86
C6orf210	-	-2.38	0.88
VKORC1L1	Vitamin K Epoxide Reductase Complex, Subunit 1-Like 1	-2.38	0.84
HSPE1	Heat Shock 10kda Protein 1 (Chaperonin 10)	-2.37	0.86
COX4I1	Cytochrome C Oxidase Subunit Iv Isoform 1	-2.37	0.86
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)	-2.37	0.85
THC2371907	-	-2.36	0.85
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.35	0.81
MYOM1	Myomesin 1 (Skelemin) 185kda	-2.35	0.82
COX5A	Cytochrome C Oxidase Subunit Va	-2.35	0.87
ACAD9	Acyl-Coenzyme A Dehydrogenase Family, Member 9	-2.34	0.85
LDHA	Lactate Dehydrogenase A	-2.34	0.85
NDUFV1	Nadh Dehydrogenase (Ubiquinone) Flavoprotein 1, 51kda	-2.33	0.90
RTCD1	Rna Terminal Phosphate Cyclase Domain 1	-2.33	0.88
SAA4	Serum Amyloid A4, Constitutive	-2.33	0.75
FADS1	Fatty Acid Desaturase 1	-2.33	0.71
ATP6V1D	Atpase, H+ Transporting, Lysosomal 34kda, V1 Subunit D	-2.33	0.87
THC2337324	-	-2.32	0.84
C20orf24	Chromosome 20 Open Reading Frame 24	-2.32	0.84
H19	H19, Imprinted Maternally Expressed Untranslated Mrna	-2.32	0.77
PPIF	Peptidylprolyl Isomerase F (Cyclophilin F)	-2.32	0.82
ENST00000330072	-	-2.31	0.88
COX7A2	Cytochrome C Oxidase Subunit Viia Polypeptide 2 (Liver)	-2.31	0.87
NDUFB7	Nadh Dehydrogenase (Ubiquinone) 1 Beta Subcomplex, 7, 18kda	-2.31	0.90
HEYL	Hairy/Enhancer-Of-Split Related With Yrpw Motif-Like	-2.30	0.79
COPS5	Cop9 Constitutive Photomorphogenic Homolog Subunit 5 (Arabidopsis)	-2.30	0.90
NME1	Non-Metastatic Cells 1, Protein (Nm23a) Expressed In	-2.30	0.86
THC2295911	-	-2.29	0.87
C21orf70	Chromosome 21 Open Reading Frame 70	-2.29	0.89
MCF2L	Mcf.2 Cell Line Derived Transforming Sequence-Like	-2.29	0.84
GPRC5C	G Protein-Coupled Receptor, Family C, Group 5, Member C	-2.29	0.85
POLD2	Polymerase (Dna Directed), Delta 2, Regulatory Subunit 50kda	-2.29	0.87
CKB	Creatine Kinase, Brain	-2.29	0.84
LOC400969	-	-2.28	0.85
GPT	Glutamic-Pyruvate Transaminase (Alanine Aminotransferase)	-2.28	0.86

CBWD2	Hypothetical Protein From Clone 1659351	-2.28	0.87
COX7B	Cytochrome C Oxidase Subunit Viib	-2.27	0.84
MGC45871	-	-2.27	0.85
COX4I1	Cytochrome C Oxidase Subunit Iv Isoform 1	-2.26	0.87
ENST00000332498	-	-2.26	0.85
NDUFS7	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 7, 20kda (Nadh-Coenzyme Q Reductase)	-2.26	0.87
SLC25A5	Solute Carrier Family 25 (Mitochondrial Carrier; Adenine Nucleotide Translocator), Member 5	-2.26	0.87
S100A16	S100 Calcium Binding Protein A16	-2.26	0.89
DERL1	Der1-Like Domain Family, Member 1	-2.25	0.90
ATP5C1	Atp Synthase, H+ Transporting, Mitochondrial F1 Complex, Gamma Polypeptide 1	-2.25	0.88
PC	Pyruvate Carboxylase	-2.24	0.88
SLC25A1	Solute Carrier Family 25 (Mitochondrial Carrier; Citrate Transporter), Member 1	-2.24	0.85
HIST2H2AA	Histone 2, H2aa	-2.24	0.81
MYCBP	C-Myc Binding Protein	-2.24	0.86
FBXO9	F-Box Protein 9	-2.24	0.88
C16orf49	-	-2.23	0.90
HSPA12A	Heat Shock Protein 12a	-2.23	0.82
A_24_P50666	-	-2.23	0.81
PDHX	Pyruvate Dehydrogenase Complex, Component X	-2.22	0.88
PGK1	Phosphoglycerate Kinase 1	-2.22	0.88
MTCH2	Mitochondrial Carrier Homolog 2 (C. Elegans)	-2.22	0.86
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.21	0.83
A_23_P99731	-	-2.21	0.90
PPIA	Peptidylprolyl Isomerase A (Cyclophilin A)	-2.21	0.89
MGC4825	Hypothetical Protein Mgc4825	-2.21	0.88
THRSP	Thyroid Hormone Responsive (Spot14 Homolog, Rat)	-2.21	0.78
IFT20	Intraflagellar Transport 20 Homolog (Chlamydomonas)	-2.21	0.90
MRAP	Melanocortin 2 Receptor Accessory Protein	-2.21	0.79
FLJ37964	-	-2.21	0.89
EPHX2	Epoxide Hydrolase 2, Cytoplasmic	-2.20	0.89
C20orf3	Chromosome 20 Open Reading Frame 3	-2.20	0.86
ENC1	Ectodermal-Neural Cortex (With Btb-Like Domain)	-2.20	0.88
PFKFB1	6-Phosphofructo-2-Kinase/Fructose-2,6-Biphosphatase 1	-2.20	0.90
A_24_P152713	-	-2.19	0.85
SIL1	Sil1 Homolog, Endoplasmic Reticulum Chaperone (S. Cerevisiae)	-2.19	0.88
SLC25A3	Solute Carrier Family 25 (Mitochondrial Carrier; Phosphate Carrier), Member 3	-2.19	0.88
A_24_P384210	-	-2.19	0.88
ASAH1	N-Acylsphingosine Amidohydrolase (Acid Ceramidase) 1	-2.18	0.80
ISOC2	Isochorismatase Domain Containing 2	-2.18	0.85
ATP5J	Atp Synthase, H+ Transporting, Mitochondrial F0 Complex,	-2.18	0.87

	Subunit F6		
SDHA	Succinate Dehydrogenase Complex, Subunit A, Flavoprotein (Fp)	-2.18	0.88
ADPN	Adiponutrin	-2.18	0.77
LDHA	Lactate Dehydrogenase A	-2.18	0.85
TCTA	T-Cell Leukemia Translocation Altered Gene	-2.18	0.86
CARHSP1	Calcium Regulated Heat Stable Protein 1, 24kda	-2.17	0.87
GPT2	Glutamic Pyruvate Transaminase (Alanine Aminotransferase) 2	-2.17	0.85
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.17	0.81
ISOC2	Isochorismatase Domain Containing 2	-2.17	0.86
ADAMTS2	Adam Metallopeptidase With Thrombospondin Type 1 Motif, 2	-2.16	0.88
POLDIP2	Polymerase (Dna-Directed), Delta Interacting Protein 2	-2.16	0.91
THC2311248	-	-2.16	0.88
TSPAN18	Tetraspanin 18	-2.16	0.88
NUDT8	Nudix (Nucleoside Diphosphate Linked Moiety X)-Type Motif 8	-2.16	0.88
BC013295	-	-2.15	0.86
UQCR	Ubiquinol-Cytochrome C Reductase, 6.4kda Subunit	-2.15	0.87
BC035751	-	-2.15	0.89
BC036599	-	-2.15	0.86
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.15	0.81
CD164	Cd164 Antigen, Sialomucin	-2.15	0.87
C16orf33	Chromosome 16 Open Reading Frame 33	-2.14	0.88
CYCS	Cytochrome C, Somatic	-2.14	0.85
ETFB	Electron-Transfer-Flavoprotein, Beta Polypeptide	-2.14	0.87
SULT1A1	Sulfotransferase Family, Cytosolic, 1a, Phenol-Preferring, Member 1	-2.14	0.88
SLC35B4	Solute Carrier Family 35, Member B4	-2.14	0.91
SFRP2	Secreted Frizzled-Related Protein 2	-2.13	0.75
YWHAZ	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein, Zeta Polypeptide	-2.13	0.87
BG028463	-	-2.13	0.87
FCN1	Ficolin (Collagen/Fibrinogen Domain Containing) 1	-2.13	0.81
LTB4DH	Leukotriene B4 12-Hydroxydehydrogenase	-2.13	0.88
SLC24A3	Solute Carrier Family 24 (Sodium/Potassium/Calcium Exchanger), Member 3	-2.12	0.85
MOSC1	Moco Sulphurase C-Terminal Domain Containing 1	-2.12	0.90
ENST00000169551	-	-2.12	0.89
A_24_P771278	-	-2.12	0.88
THRSP	Thyroid Hormone Responsive (Spot14 Homolog, Rat)	-2.12	0.76
KCTD10	Potassium Channel Tetramerisation Domain Containing 10	-2.11	0.87
MRPL53	Mitochondrial Ribosomal Protein L53	-2.11	0.91
TP53I3	Tumor Protein P53 Inducible Protein 3	-2.11	0.84
HIBCH	3-Hydroxyisobutyryl-Coenzyme A Hydrolase	-2.11	0.89

PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.11	0.86
DGAT1	Diacylglycerol O-Acyltransferase Homolog 1 (Mouse)	-2.11	0.88
PX19	Px19-Like Protein	-2.11	0.91
FBXO9	F-Box Protein 9	-2.10	0.87
COL5A2	Collagen, Type V, Alpha 2	-2.10	0.86
MRPL47	Mitochondrial Ribosomal Protein L47	-2.10	0.90
ENST00000307106	-	-2.10	0.89
SLC25A4	Solute Carrier Family 25 (Mitochondrial Carrier; Adenine Nucleotide Translocator), Member 4	-2.10	0.91
AKR1C1	Aldo-Keto Reductase Family 1, Member C1 (Dihydrodiol Dehydrogenase 1; 20-Alpha (3-Alpha)-Hydroxysteroid Dehydrogenase)	-2.10	0.84
ATOX1	Atx1 Antioxidant Protein 1 Homolog (Yeast)	-2.10	0.86
LFNG	Lunatic Fringe Homolog (Drosophila)	-2.09	0.87
SDHD	Succinate Dehydrogenase Complex, Subunit D, Integral Membrane Protein	-2.09	0.88
C7orf24	Chromosome 7 Open Reading Frame 24	-2.09	0.91
COX5B	Cytochrome C Oxidase Subunit Vb	-2.09	0.90
PMS2L5	Postmeiotic Segregation Increased 2-Like 5	-2.09	0.90
POP4	Processing Of Precursor 4, Ribonuclease P/Mrp Subunit (S. Cerevisiae)	-2.09	0.91
ZNF219	Zinc Finger Protein 219	-2.09	0.86
RARRES2	Retinoic Acid Receptor Responder (Tazarotene Induced) 2	-2.09	0.83
A_24_P745670	-	-2.08	0.89
FLJ11235	Hypothetical Protein Flj11235	-2.08	0.89
PREB	Prolactin Regulatory Element Binding	-2.08	0.85
C17orf42	Chromosome 17 Open Reading Frame 42	-2.08	0.90
A_24_P594293	-	-2.08	0.87
HIP2	Huntingtin Interacting Protein 2	-2.08	0.89
DERL1	Der1-Like Domain Family, Member 1	-2.07	0.89
PCCB	Propionyl Coenzyme A Carboxylase, Beta Polypeptide	-2.07	0.89
TUBB2	Tubulin, beta 2A	-2.07	0.74
GSTK1	Glutathione S-Transferase Subunit 13 Homolog	-2.06	0.88
A_24_P739075	-	-2.06	0.88
SUCLG1	Succinate-Coa Ligase, Gdp-Forming, Alpha Subunit	-2.06	0.88
COX8A	Cytochrome C Oxidase Subunit 8a (Ubiquitous)	-2.06	0.89
APBB1IP	Amyloid Beta (A4) Precursor Protein-Binding, Family B, Member 1 Interacting Protein	-2.06	0.84
NQO1	Nad(P)H Dehydrogenase, Quinone 1	-2.06	0.86
MMP28	Matrix Metallopeptidase 28	-2.05	0.87
TIMM13	Translocase Of Inner Mitochondrial Membrane 13 Homolog (Yeast)	-2.05	0.87
MRPL40	Nuclear Localization Signal Deleted In Velocardiofacial Syndrome	-2.05	0.90
A_24_P853004	-	-2.05	0.90
PLVAP	Plasmalemma Vesicle Associated Protein	-2.05	0.84

FARSLA	Phenylalanine-Trna Synthetase-Like, Alpha Subunit	-2.04	0.90
A_24_P341058	-	-2.04	0.89
A_32_P128399	-	-2.04	0.85
LRIG1	Leucine-Rich Repeats And Immunoglobulin-Like Domains 1	-2.04	0.89
ENST00000328135	-	-2.04	0.91
NDUFS3	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 3, 30kda (Nadh-Coenzyme Q Reductase)	-2.04	0.90
SGCB	Sarcoglycan, Beta (43kda Dystrophin-Associated Glycoprotein)	-2.04	0.90
A_24_P67432	-	-2.04	0.87
UBE2L3	Ubiquitin-Conjugating Enzyme E2l 3	-2.04	0.91
APLN	Apelin, Agtrl1 Ligand	-2.04	0.85
TFPI2	Tissue Factor Pathway Inhibitor 2	-2.04	0.81
A_24_P58477	-	-2.03	0.90
A_24_P840868	-	-2.03	0.88
SARA1	SAR1 gene homolog A (S. cerevisiae)	-2.03	0.86
AKR1C1	Aldo-Keto Reductase Family 1, Member C1 (Dihydrodiol Dehydrogenase 1; 20-Alpha (3-Alpha)-Hydroxysteroid Dehydrogenase)	-2.03	0.85
BCKDHB	Branched Chain Keto Acid Dehydrogenase E1, Beta Polypeptide (Maple Syrup Urine Disease)	-2.03	0.89
ENST00000332041	-	-2.03	0.86
A_24_P25040	-	-2.03	0.87
LRRN5	Leucine Rich Repeat Neuronal 5	-2.03	0.90
COG8	Component Of Oligomeric Golgi Complex 8	-2.02	0.89
RASSF4	Ras Association (Ralgds/Af-6) Domain Family 4	-2.02	0.82
TNFRSF21	Tumor Necrosis Factor Receptor Superfamily, Member 21	-2.02	0.87
PCCB	Propionyl Coenzyme A Carboxylase, Beta Polypeptide	-2.02	0.88
NR2F6	Nuclear Receptor Subfamily 2, Group F, Member 6	-2.02	0.88
MRPL12	Mitochondrial Ribosomal Protein L12	-2.01	0.89
NOD9	Nod9 Protein	-2.01	0.92
FAH	Fumarylacetoacetate Hydrolase (Fumarylacetoacetase)	-2.01	0.88
ATP5J2	Atp Synthase, H+ Transporting, Mitochondrial F0 Complex, Subunit F2	-2.01	0.87
BOLA3	Bola-Like 3 (E. Coli)	-2.01	0.88
SLC29A4	Solute Carrier Family 29 (Nucleoside Transporters), Member 4	-2.01	0.87
FLJ37478	Hypothetical Protein Loc339983	-2.01	0.86
LRRN6A	Leucine Rich Repeat Neuronal 6a	-2.00	0.89
C6orf108	Chromosome 6 Open Reading Frame 108	-2.00	0.86
TUBB3	Melanocortin 1 Receptor (Alpha Melanocyte Stimulating Hormone Receptor)	-2.00	0.80
MPZL1	Myelin Protein Zero-Like 1	-2.00	0.88
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-2.00	0.83
EEF1E1	Eukaryotic Translation Elongation Factor 1 Epsilon 1	-1.99	0.89
SLC25A10	Solute Carrier Family 25 (Mitochondrial Carrier; Dicarboxylate Transporter), Member 10	-1.99	0.87

UQCR	Ubiquinol-Cytochrome C Reductase, 6.4kda Subunit	-1.99	0.89
ATP5F1	Atp Synthase, H+ Transporting, Mitochondrial F0 Complex, Subunit B1	-1.99	0.89
MGC13017	Similar To Riken Cdna A430101b06 Gene	-1.99	0.86
NDUFA2	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 2, 8kda	-1.99	0.89
A_32_P174385	-	-1.98	0.88
MRPS33	Mitochondrial Ribosomal Protein S33	-1.98	0.88
CCM2	Cerebral Cavernous Malformation 2	-1.98	0.91
PIGQ	Phosphatidylinositol Glycan, Class Q	-1.98	0.90
POLR2L	Polymerase (Rna) Ii (Dna Directed) Polypeptide L, 7.6kda	-1.98	0.87
NDUFS2	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 2, 49kda (Nadh-Coenzyme Q Reductase)	-1.97	0.88
PNPLA4	Patatin-Like Phospholipase Domain Containing 4	-1.97	0.91
OPLAH	5-Oxoprolinase (Atp-Hydrolysing)	-1.97	0.90
IRS1	Insulin Receptor Substrate 1	-1.97	0.83
COL4A1	Collagen, Type Iv, Alpha 1	-1.97	0.87
CCND1	Cyclin D1	-1.97	0.84
NDUFB5	Nadh Dehydrogenase (Ubiquinone) 1 Beta Subcomplex, 5, 16kda	-1.96	0.90
CMKOR1	Chemokine Orphan Receptor 1	-1.96	0.88
AK056401	-	-1.96	0.90
NDUFV2	Nadh Dehydrogenase (Ubiquinone) Flavoprotein 2, 24kda	-1.96	0.89
C6orf51	Chromosome 6 Open Reading Frame 51	-1.96	0.91
TUBB8	Tubulin, Beta 8	-1.96	0.80
ACY1	Aminoacylase 1	-1.96	0.90
FPR1	Formyl Peptide Receptor 1	-1.95	0.84
THC2404941	-	-1.95	0.88
GYPC	Glycophorin C (Gerbich Blood Group)	-1.95	0.90
GJA1	Gap Junction Protein, Alpha 1, 43kda (Connexin 43)	-1.95	0.88
LOC201158	-	-1.95	0.86
S100A8	S100 Calcium Binding Protein A8 (Calgranulin A)	-1.95	0.72
NDUFA6	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 6, 14kda	-1.95	0.90
SYTL3	Synaptotagmin-Like 3	-1.94	0.88
MYLIP	Myosin Regulatory Light Chain Interacting Protein	-1.94	0.87
SLC25A5	Solute Carrier Family 25 (Mitochondrial Carrier; Adenine Nucleotide Translocator), Member 5	-1.94	0.89
SLC25A5	Solute Carrier Family 25 (Mitochondrial Carrier; Adenine Nucleotide Translocator), Member 5	-1.94	0.87
NDUFA2	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 2, 8kda	-1.94	0.90
ENST00000306024	-	-1.94	0.91
PXMP2	Peroxisomal Membrane Protein 2, 22kda	-1.94	0.87
A_24_P600622	-	-1.93	0.89
CBWD2	Hypothetical Protein From Clone 1659351	-1.93	0.90
PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-1.93	0.84

SLC22A5	Solute Carrier Family 22 (Organic Cation Transporter), Member 5	-1.93	0.88
A_24_P152792	-	-1.93	0.91
CCND1	Cyclin D1	-1.93	0.87
HIST1H2AD	Histone 1, H2ad	-1.92	0.84
C6orf55	Chromosome 6 Open Reading Frame 55	-1.92	0.91
SLC25A11	Solute Carrier Family 25 (Mitochondrial Carrier; Oxoglutarate Carrier), Member 11	-1.92	0.90
ACADM	Acyl-Coenzyme A Dehydrogenase, C-4 To C-12 Straight Chain	-1.92	0.87
AK2	Adenylate Kinase 2	-1.92	0.87
RAB9P1	Rab9, Member Ras Oncogene Family, Pseudogene 1	-1.92	0.89
TUBB6	Tubulin, Beta 6	-1.92	0.78
C2orf7	Chromosome 2 Open Reading Frame 7	-1.92	0.87
EPB41L1	Erythrocyte Membrane Protein Band 4.1-Like 1	-1.91	0.85
ACSL3	Acyl-Coa Synthetase Long-Chain Family Member 3	-1.91	0.88
MGC14141	Hypothetical Protein Mgc14141	-1.91	0.90
NIPSNAP3A	Nipsnap Homolog 3a (C. Elegans)	-1.91	0.90
A_24_P264685	-	-1.91	0.87
PLK2	Polo-Like Kinase 2 (Drosophila)	-1.90	0.87
HOOK2	Hook Homolog 2 (Drosophila)	-1.90	0.88
ACOX1	Acyl-Coenzyme A Oxidase 1, Palmitoyl	-1.90	0.89
CYCS	Cytochrome C, Somatic	-1.90	0.86
SLC25A16	Solute Carrier Family 25 (Mitochondrial Carrier; Graves Disease Autoantigen), Member 16	-1.90	0.88
A_24_P921801	-	-1.90	0.88
P4HB	Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide	-1.89	0.88
FXYD6	Fxyd Domain Containing Ion Transport Regulator 6	-1.88	0.88
LOC388965	Similar To Hepatitis C Virus Core-Binding Protein 6; Cervical Cancer Oncogene 3	-1.88	0.90
ABCB6	Atp-Binding Cassette, Sub-Family B (Mdr/Tap), Member 6	-1.88	0.90
DLD	Dihydrolipoamide Dehydrogenase (E3 Component Of Pyruvate Dehydrogenase Complex, 2-Oxo-Glutarate Complex, Branched Chain Keto Acid Dehydrogenase Complex)	-1.88	0.90
SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	-1.88	0.79
C3orf1	Chromosome 3 Open Reading Frame 1	-1.88	0.91
CLYBL	Citrate Lyase Beta Like	-1.88	0.89
ENST00000308894	-	-1.88	0.89
ACOX1	Acyl-Coenzyme A Oxidase 1, Palmitoyl	-1.88	0.85
THC2345956	-	-1.88	0.83
PHPT1	Phosphohistidine Phosphatase 1	-1.87	0.90
KIAA1036	-	-1.87	0.88
MRAP	Melanocortin 2 Receptor Accessory Protein	-1.87	0.84
A_24_P633686	-	-1.87	0.88
SDHD	Succinate Dehydrogenase Complex, Subunit D, Integral Membrane Protein	-1.87	0.90

PLVAP	Plasmalemma Vesicle Associated Protein	-1.87	0.90
F13A1	Coagulation Factor Xiii, A1 Polypeptide	-1.86	0.80
A_24_P212314	-	-1.86	0.80
BG952851	-	-1.86	0.88
POLR3K	Polymerase (Rna) Iii (Dna Directed) Polypeptide K, 12.3 Kda	-1.86	0.91
MGC11335	Hypothetical Protein Mgc11335	-1.86	0.90
PHPT1	Phosphohistidine Phosphatase 1	-1.86	0.90
MSRB2	Methionine Sulfoxide Reductase B2	-1.86	0.90
ITGA6	Integrin, Alpha 6	-1.85	0.87
QIL1	Qil1 Protein	-1.85	0.90
MCTS1	Malignant T Cell Amplified Sequence 1	-1.85	0.90
COX5A	Cytochrome C Oxidase Subunit Va	-1.85	0.88
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)	-1.85	0.87
AK2	Adenylate Kinase 2	-1.85	0.89
ALG5	Asparagine-Linked Glycosylation 5 Homolog (Yeast, Dolichyl-Phosphate Beta-Glucosyltransferase)	-1.84	0.92
FLJ10292	Mago-Nashi Homolog	-1.84	0.90
MGC15416	Hypothetical Protein Mgc15416	-1.84	0.86
NDUFA1	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 1, 7.5kda	-1.84	0.90
SPCS3	Signal Peptidase Complex Subunit 3 Homolog (S. Cerevisiae)	-1.84	0.88
AK022629	-	-1.84	0.86
UQCRC1	Ubiquinol-Cytochrome C Reductase Core Protein I	-1.84	0.91
LOC92482	Hypothetical Protein Loc92482	-1.84	0.90
MGC19780	-	-1.84	0.91
DNCL1	Dynein, light chain, LC8-type 1	-1.84	0.88
EHD2	Eh-Domain Containing 2	-1.83	0.90
DNM1L	Dynamin 1-Like	-1.83	0.91
SMUG1	Single-Strand-Selective Monofunctional Uracil-Dna Glycosylase 1	-1.83	0.89
RTN3	Reticulon 3	-1.82	0.89
VAMP5	Vesicle-Associated Membrane Protein 5 (Myobrevin)	-1.82	0.91
MMP17	Matrix Metallopeptidase 17 (Membrane-Inserted)	-1.82	0.91
SH3GLB1	Sh3-Domain Grb2-Like Endophilin B1	-1.82	0.89
THC2442304	-	-1.82	0.91
AMID	Hypothetical Protein Mgc13000	-1.82	0.89
APRT	Adenine Phosphoribosyltransferase	-1.81	0.89
NDUFA1	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 1, 7.5kda	-1.81	0.92
NMT1	N-Myristoyltransferase 1	-1.81	0.90
FASTK	Fas-Activated Serine/Threonine Kinase	-1.81	0.90
LOC391020	Similar To Interferon-Induced Transmembrane Protein 3 (Interferon-Inducible Protein 1-8u)	-1.81	0.88
APBB1IP	Amyloid Beta (A4) Precursor Protein-Binding, Family B, Member 1 Interacting Protein	-1.81	0.88

PLA2G4A	Phospholipase A2, Group Iva (Cytosolic, Calcium-Dependent)	-1.81	0.84
GRHPR	Glyoxylate Reductase/Hydroxypyruvate Reductase	-1.81	0.90
ZNHIT1	Zinc Finger, Hit Type 1	-1.81	0.90
TIMM17A	Translocase Of Inner Mitochondrial Membrane 17 Homolog A (Yeast)	-1.81	0.88
NDUFA11	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 11, 14.7kda	-1.80	0.89
ZDHHC24	Zinc Finger, Dhhc-Type Containing 24	-1.80	0.90
CD164	Cd164 Antigen, Sialomucin	-1.80	0.90
A_23_P315106	-	-1.80	0.91
LOC401270	-	-1.80	0.89
A_24_P101503	-	-1.80	0.91
PX19	Px19-Like Protein	-1.80	0.90
MRPL53	Mitochondrial Ribosomal Protein L53	-1.80	0.91
COX6B1	Cytochrome C Oxidase Subunit Vib Polypeptide 1 (Ubiquitous)	-1.80	0.89
PSMA2	Proteasome (Prosome, Macropain) Subunit, Alpha Type, 2	-1.80	0.89
DKFZp586C1924	-	-1.80	0.91
IL32	Interleukin 32	-1.80	0.90
ACYP2	Acylphosphatase 2, Muscle Type	-1.80	0.90
COX7C	Cytochrome C Oxidase Subunit Viic	-1.79	0.89
MAWBP	Mawd Binding Protein	-1.79	0.91
A_23_P254288	-	-1.79	0.88
AKR1C3	Aldo-Keto Reductase Family 1, Member C3 (3-Alpha Hydroxysteroid Dehydrogenase, Type Ii)	-1.79	0.86
RGS16	Regulator Of G-Protein Signalling 16	-1.79	0.86
ENST00000308836	-	-1.79	0.92
NDUFS6	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 6, 13kda (Nadh-Coenzyme Q Reductase)	-1.79	0.90
NID2	Nidogen 2 (Osteonidogen)	-1.79	0.86
PSMA6	Proteasome (Prosome, Macropain) Subunit, Alpha Type, 6	-1.79	0.89
PMS2L2	Postmeiotic Segregation Increased 2-Like 2	-1.78	0.89
BC007809	-	-1.78	0.90
TIMM10	Translocase Of Inner Mitochondrial Membrane 10 Homolog (Yeast)	-1.78	0.91
THC2274391	-	-1.78	0.90
GLT28D1	Glycosyltransferase 28 Domain Containing 1	-1.78	0.90
BOLA2	Bola-Like 2 (E. Coli)	-1.78	0.89
EDARADD	Edar-Associated Death Domain	-1.78	0.88
C16orf9	Chromosome 16 Open Reading Frame 9	-1.78	0.92
MGC15763	-	-1.78	0.91
THC2271508	-	-1.78	0.86
A_24_P600603	-	-1.78	0.90
PECR	Peroxisomal Trans-2-Enoyl-Coa Reductase	-1.77	0.90
DAB2IP	Ngap-Like Protein	-1.77	0.91
SURF4	Surfeit 4	-1.77	0.88

MRPL13	Mitochondrial Ribosomal Protein L13	-1.77	0.90
MRPS18C	Mitochondrial Ribosomal Protein S18c	-1.77	0.92
ENST00000276672	-	-1.77	0.91
PGAM1	Phosphoglycerate Mutase 1 (Brain)	-1.76	0.89
NCE2	Ubiquitin-conjugating enzyme E2F (putative)	-1.76	0.93
LOC128977	Hypothetical Protein Loc128977	-1.76	0.93
C14orf156	Chromosome 14 Open Reading Frame 156	-1.76	0.90
DTX1	Deltex Homolog 1 (Drosophila)	-1.76	0.89
NCBP2	Nuclear Cap Binding Protein Subunit 2, 20kda	-1.76	0.90
MRPL23	Mitochondrial Ribosomal Protein L23	-1.76	0.91
CK819477	-	-1.76	0.89
PTPLB	Protein Tyrosine Phosphatase-Like (Proline Instead Of Catalytic Arginine), Member B	-1.76	0.80
FBXW5	F-Box And Wd-40 Domain Protein 5	-1.76	0.90
ATR	Ataxia Telangiectasia And Rad3 Related	-1.76	0.88
C14orf126	Chromosome 14 Open Reading Frame 126	-1.76	0.92
AURKAIP1	Aurora Kinase A Interacting Protein 1	-1.76	0.90
BU595528	-	-1.75	0.90
C21orf6	Chromosome 21 Open Reading Frame 6	-1.75	0.90
CXX1	Caax Box 1	-1.74	0.91
COX4NB	Cox4 Neighbor	-1.74	0.91
C5orf18	-	-1.74	0.89
FLJ12436	-	-1.74	0.91
FBXO33	F-Box Protein 33	-1.74	0.90
NPB	Neuropeptide B	-1.74	0.88
ZNF219	Zinc Finger Protein 219	-1.74	0.87
A_24_P910169	-	-1.73	0.91
PHB	Prohibitin	-1.73	0.91
COPB2	Coatomer Protein Complex, Subunit Beta 2 (Beta Prime)	-1.73	0.92
CECR4	Cat Eye Syndrome Chromosome Region, Candidate 4	-1.73	0.89
CXCR4	Chemokine (C-X-C Motif) Receptor 4	-1.73	0.88
ENG	Endoglin (Osler-Rendu-Weber Syndrome 1)	-1.72	0.89
AGPAT3	1-Acylglycerol-3-Phosphate O-Acyltransferase 3	-1.72	0.88
A_24_P679796	-	-1.72	0.89
CAV2	Caveolin 2	-1.72	0.91
CV323793	-	-1.72	0.88
C10orf74	-	-1.71	0.89
TSSC1	Tumor Suppressing Subtransferable Candidate 1	-1.71	0.91
SERPINB1	Serpin Peptidase Inhibitor, Clade B (Ovalbumin), Member 1	-1.71	0.90
MOCS2	Molybdenum Cofactor Synthesis 2	-1.71	0.90
UQCRC2	Ubiquinol-Cytochrome C Reductase Core Protein Ii	-1.71	0.92
ENST00000361329	-	-1.71	0.91
SPR	Sepiapterin Reductase (7,8-Dihydrobiopterin:Nadp+ Oxidoreductase)	-1.71	0.91
ATPAF1	Atp Synthase Mitochondrial F1 Complex Assembly Factor 1	-1.70	0.89

NCBP1	Nuclear Cap Binding Protein Subunit 1, 80kda	-1.70	0.92
DRAP1	Dr1-Associated Protein 1 (Negative Cofactor 2 Alpha)	-1.70	0.92
HINT1	Histidine Triad Nucleotide Binding Protein 1	-1.70	0.92
APBB1IP	Amyloid Beta (A4) Precursor Protein-Binding, Family B, Member 1 Interacting Protein	-1.70	0.85
NDUFB7	Nadh Dehydrogenase (Ubiquinone) 1 Beta Subcomplex, 7, 18kda	-1.69	0.91
TRIM10	Tripartite Motif-Containing 10	-1.69	0.92
BX490547	-	-1.69	0.90
GPI	Glucose Phosphate Isomerase	-1.69	0.89
TRA1	Heat shock protein 90kDa beta (Grp94), member 1	-1.69	0.87
GPAA1	Glycosylphosphatidylinositol Anchor Attachment Protein 1 Homolog (Yeast)	-1.68	0.93
CIDEC	Cell Death-Inducing Dffa-Like Effector C	-1.68	0.83
CBWD3	Hypothetical Protein From Clone 1659351	-1.68	0.91
GIMAP5	Gtpase, Imap Family Member 5	-1.68	0.90

Energy Restriction (ER)	***Up Regulated Genes***		
RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1	4.54	1.41
MIG-6	ERBB receptor feedback inhibitor 1	4.39	1.27
ENST00000315208	-	3.62	1.30
EDN1	Endothelin 1	3.46	1.75
NAP1L1	Nucleosome Assembly Protein 1-Like 1	3.46	1.29
THC2403712	-	3.44	1.24
A_24_P332292	-	3.44	1.17
GADD45A	Growth Arrest And Dna-Damage-Inducible, Alpha	3.29	1.27
ALDH1A1	Aldehyde Dehydrogenase 1 Family, Member A1	3.21	1.27
FHL1	Four And A Half Lim Domains 1	3.20	1.43
EPB41L4B	Erythrocyte Membrane Protein Band 4.1 Like 4b	3.16	1.41
TIGA1	Tiga1	3.16	1.19
ROBO3	Roundabout, Axon Guidance Receptor, Homolog 3 (Drosophila)	2.99	1.25
GPX3	Glutathione Peroxidase 3 (Plasma)	2.98	1.62
AL833309	-	2.92	1.25
ANGPTL4	Angiopoietin-Like 4	2.85	1.28
ADH1C	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	2.85	1.38
C7	Complement Component 7	2.83	1.27
VAT1	Vesicle Amine Transport Protein 1 Homolog (T Californica)	2.79	1.22
CDKN1C	Cyclin-Dependent Kinase Inhibitor 1c (P57, Kip2)	2.77	1.26
ADH1A	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	2.75	1.39
HTRA3	Htra Serine Peptidase 3	2.73	1.48
PDE4A	Phosphodiesterase 4a, Camp-Specific (Phosphodiesterase E2 Dunce Homolog, Drosophila)	2.71	1.12
MXI1	Max Interactor 1	2.69	1.18
GPRASP1	G Protein-Coupled Receptor Associated Sorting Protein 1	2.68	1.20

ADH1B	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	2.67	1.28
SMARCC2	Swi/Snf Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily C, Member 2	2.66	1.18
FAM59A	Family With Sequence Similarity 59, Member A	2.66	1.20
AK123972	-	2.65	1.18
ADH1A	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	2.65	1.37
CBX7	Chromobox Homolog 7	2.64	1.25
CIRBP	Cold Inducible Rna Binding Protein	2.63	1.17
MAN2A2	Mannosidase, Alpha, Class 2a, Member 2	2.63	1.26
ZNF395	Hypothetical Protein Dkfzp434k1210	2.61	1.17
SETBP1	Set Binding Protein 1	2.60	1.21
ENST00000333615	-	2.58	1.27
C9orf111	Hypothetical Protein Flj31318	2.55	1.16
CIDEA	Cell Death-Inducing Dffa-Like Effector A	2.54	1.51
CSDE1	Cold Shock Domain Containing E1, Rna-Binding	2.52	1.14
FABP4	Fatty Acid Binding Protein 4, Adipocyte	2.50	1.25
GEM	Gtp Binding Protein Overexpressed In Skeletal Muscle	2.47	1.22
IMPA2	Inositol(Myo)-1(Or 4)-Monophosphatase 2	2.46	1.19

Weight Stabilization (WS)	***Down Regulated Genes***		
CAPG	Capping Protein (Actin Filament), Gelsolin-Like	-9.03	0.66
ITGAX	Integrin, Alpha X (Complement Component 3 Receptor 4 Subunit)	-8.90	0.62
SLAMF8	Slam Family Member 8	-8.21	0.64
A_24_P281683	-	-8.01	0.70
GDF15	Growth Differentiation Factor 15	-8.00	0.49
LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)	-7.94	0.45
CD52	Cd52 Antigen (Campath-1 Antigen)	-7.83	0.40
RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1	-7.68	0.57
CTSB	Cathepsin B	-7.64	0.61
ACP5	Acid Phosphatase 5, Tartrate Resistant	-7.53	0.32
FBP1	Fructose-1,6-Bisphosphatase 1	-7.42	0.55
ATP6V1B2	Atpase, H+ Transporting, Lysosomal 56/58kda, V1 Subunit B2	-6.98	0.78
LAPTM5	Lysosomal Associated Multispanning Membrane Protein 5	-6.92	0.67
ENST00000313481	-	-6.85	0.70
LCP1	Lymphocyte Cytosolic Protein 1 (L-Plastin)	-6.62	0.58
HCST	Hematopoietic Cell Signal Transducer	-6.47	0.61
LAPTM5	Lysosomal Associated Multispanning Membrane Protein 5	-6.40	0.63
CHI3L1	Chitinase 3-Like 1 (Cartilage Glycoprotein-39)	-6.38	0.59
TYROBP	Tyro Protein Tyrosine Kinase Binding Protein	-6.35	0.59
GLIPR1	Gli Pathogenesis-Related 1 (Glioma)	-6.30	0.70
CTSB	Cathepsin B	-6.11	0.62
CPVL	Carboxypeptidase, Vitellogenic-Like	-6.06	0.72

ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)	-5.96	0.51
KYNU	Kynureninase (L-Kynurenine Hydrolase)	-5.91	0.70
ATP1B1	Atpase, Na+/K+ Transporting, Beta 1 Polypeptide	-5.89	0.57
ST14	Suppression Of Tumorigenicity 14 (Colon Carcinoma)	-5.88	0.66
IFI30	Interferon, Gamma-Inducible Protein 30	-5.80	0.42
GLA	Galactosidase, Alpha	-5.73	0.81
-	Cd68 Antigen	-5.73	0.59
CCR1	Chemokine (C-C Motif) Receptor 1	-5.71	0.56
DHRS9	Dehydrogenase/Reductase (Sdr Family) Member 9	-5.67	0.60
BCAT1	Branched Chain Aminotransferase 1, Cytosolic	-5.60	0.67
CD53	Cd53 Antigen	-5.58	0.72
RNASET2	Ribonuclease T2	-5.50	0.73
CTSS	Cathepsin S	-5.49	0.62
ATF3	Activating Transcription Factor 3	-5.45	0.65
VAMP8	Vesicle-Associated Membrane Protein 8 (Endobrevin)	-5.39	0.68
C19orf28	Hypothetical Protein Pp3501	-5.37	0.70
PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor Acetylhydrolase, Plasma)	-5.24	0.43
ITGB5	Integrin, Beta 5	-5.19	0.78
CR603184	-	-5.13	0.80
SLC38A6	Solute Carrier Family 38, Member 6	-5.12	0.75
AADACL1	Arylacetamide Deacetylase-Like 1	-5.11	0.55
C1orf162	Chromosome 1 Open Reading Frame 162	-5.10	0.63
HEXB	Hexosaminidase B (Beta Polypeptide)	-5.10	0.74
IL4I1	Interleukin 4 Induced 1	-5.09	0.65
-	Cd163 Antigen	-5.02	0.59
CNKSR3	Cnksr Family Member 3	-5.00	0.79
A_23_P170719	-	-4.95	0.63
PGDS	Prostaglandin D2 Synthase, Hematopoietic	-4.95	0.73
FTHL17	Ferritin, Heavy Polypeptide-Like 17	-4.94	0.76
CTSB	Cathepsin B	-4.94	0.72
ITGAM	Integrin, Alpha M (Complement Component 3 Receptor 3 Subunit)	-4.86	0.72
GATM	Glycine Amidinotransferase (L-Arginine:Glycine Amidinotransferase)	-4.86	0.76
PPT1	Palmitoyl-Protein Thioesterase 1 (Ceroid-Lipofuscinosis, Neuronal 1, Infantile)	-4.85	0.85
TIMP2	Timp Metallopeptidase Inhibitor 2	-4.85	0.85
NPL	N-Acetylneuraminate Pyruvate Lyase (Dihydrodipicolinate Synthase)	-4.84	0.65
IRF5	Interferon Regulatory Factor 5	-4.83	0.73
HMOX1	Heme Oxygenase (Decycling) 1	-4.82	0.58
EMILIN2	Elastin Microfibril Interfacer 2	-4.78	0.60
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.76	0.23
CALM3	Calmodulin 1 (Phosphorylase Kinase, Delta)	-4.72	0.73

LHFPL2	Lipoma Hmgic Fusion Partner-Like 2	-4.67	0.73
SPINT2	Serine Peptidase Inhibitor, Kunitz Type, 2	-4.66	0.77
GPX3	Glutathione Peroxidase 3 (Plasma)	-4.65	0.66
C22orf9	Chromosome 22 Open Reading Frame 9	-4.61	0.73
ATP6V0B	Atpase, H+ Transporting, Lysosomal 21kda, V0 Subunit B	-4.60	0.84
K03200	-	-4.59	0.79
HAVCR2	Hepatitis A Virus Cellular Receptor 2	-4.57	0.68
C1orf38	Chromosome 1 Open Reading Frame 38	-4.57	0.68
SLC7A7	Solute Carrier Family 7 (Cationic Amino Acid Transporter, Y+ System), Member 7	-4.56	0.76
ANGPTL4	Angiopoietin-Like 4	-4.55	0.63
CIAS1	Chromosome 1 Open Reading Frame 7	-4.53	0.82
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.52	0.38
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.51	0.38
FLJ11000	Hypothetical Protein Flj11000	-4.47	0.85
CTSC	Cathepsin C	-4.46	0.78
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.45	0.38
GUSB	Glucuronidase, Beta	-4.44	0.77
ARRB2	Arrestin, Beta 2	-4.43	0.77
MS4A4A	Membrane-Spanning 4-Domains, Subfamily A, Member 4	-4.43	0.62
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.41	0.40
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.40	0.39
CTSD	Cathepsin D (Lysosomal Aspartyl Peptidase)	-4.40	0.71
BC040653	-	-4.39	0.83
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.39	0.39
GABARAPL1	Gaba(A) Receptor-Associated Protein Like 1	-4.39	0.89
ATP1B1	Atpase, Na+/K+ Transporting, Beta 1 Polypeptide	-4.38	0.72
SLC15A3	Solute Carrier Family 15, Member 3	-4.35	0.74
MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)	-4.35	0.41
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-4.34	0.39
MMP19	Matrix Metalloproteinase 18	-4.33	0.75
SOAT1	Sterol O-Acyltransferase (Acyl-Coenzyme A: Cholesterol Acyltransferase) 1	-4.32	0.82
C10orf125	Chromosome 10 Open Reading Frame 125	-4.32	0.83
ENST00000260045	-	-4.32	0.87
RAC2	Ras-Related C3 Botulinum Toxin Substrate 2 (Rho Family, Small Gtp Binding Protein Rac2)	-4.30	0.77
BLOC1S2	Biogenesis Of Lysosome-Related Organelles Complex-1, Subunit 2	-4.29	0.82
FGR	Gardner-Rasheed Feline Sarcoma Viral (V-Fgr) Oncogene Homolog	-4.29	0.68

SCARA3	Scavenger Receptor Class A, Member 3	-4.27	0.77
CTSL	Cathepsin L	-4.27	0.75
EBI2	Epstein-Barr Virus Induced Gene 2 (Lymphocyte-Specific G Protein-Coupled Receptor)	-4.26	0.74
SLC16A3	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 3	-4.26	0.70
TTC7B	Tetratricopeptide Repeat Domain 7b	-4.25	0.82
MGC17337	-	-4.24	0.88
FTH1	Ferritin, Heavy Polypeptide 1	-4.23	0.78
A_24_P755069	-	-4.22	0.79
BQ049338	-	-4.21	0.66
GLIPR1	Gli Pathogenesis-Related 1 (Glioma)	-4.18	0.79
METRNL	Meteorin, Glial Cell Differentiation Regulator-Like	-4.18	0.75
SEMA3G	Sema Domain, Immunoglobulin Domain (Ig), Short Basic Domain, Secreted, (Semaphorin) 3g	-4.17	0.71
ERO1L	Ero1-Like (S. Cerevisiae)	-4.16	0.87
SPOCD1	Spoc Domain Containing 1	-4.14	0.63
MMP19	Matrix Metalloproteinase 18	-4.13	0.71
HLA-DMB	Major Histocompatibility Complex, Class Ii, Dm Beta	-4.13	0.76
GPC4	Glypican 4	-4.12	0.80
LYZ	Lysozyme (Renal Amyloidosis)	-4.11	0.71
MT1E	Metallothionein 1e (Functional)	-4.11	0.83
CSTB	Cystatin B (Stefin B)	-4.11	0.80
FABP4	Fatty Acid Binding Protein 4, Adipocyte	-4.10	0.77
RNASET2	Ribonuclease T2	-4.09	0.73
MS4A7	Membrane-Spanning 4-Domains, Subfamily A, Member 7	-4.09	0.68
THC2279832	-	-4.08	0.76
IGSF21	Immunoglobin Superfamily, Member 21	-4.07	0.71
TRIM16	Tripartite Motif-Containing 16	-4.07	0.83
KIAA1212	Hypothetical Protein Loc55580	-4.06	0.88
CD83	Cd83 Antigen (Activated B Lymphocytes, Immunoglobulin Superfamily)	-4.05	0.71
MS4A6A	Cd20-Like Precusor	-4.03	0.76
KIAA1598	Kiaa1598	-4.03	0.81
SQSTM1	Sequestosome 1	-4.00	0.72
BX647543	-	-3.99	0.72
VSIG4	V-Set And Immunoglobulin Domain Containing 4	-3.98	0.63
GSTO1	Glutathione S-Transferase Omega 1	-3.96	0.82
GPC1	Glypican 1	-3.94	0.75
WDFY4	Wdfy Family Member 4	-3.93	0.73
C19orf28	Hypothetical Protein Pp3501	-3.92	0.74
RPS27L	Ribosomal Protein S27-Like	-3.92	0.88
MBP	Myelin Basic Protein	-3.92	0.85
TTYH3	Tweety Homolog 3 (Drosophila)	-3.91	0.77
ENST00000342020	-	-3.91	0.80
MFSD1	Major Facilitator Superfamily Domain Containing 1	-3.90	0.81

LGMN	Legumain	-3.90	0.75
C6orf115	Chromosome 6 Open Reading Frame 115	-3.88	0.82
A_24_P475115	-	-3.88	0.80
TFRC	Transferrin Receptor (P90, Cd71)	-3.88	0.74
LDLR	Low Density Lipoprotein Receptor (Familial Hypercholesterolemia)	-3.87	0.69
RGS10	Regulator Of G-Protein Signalling 10	-3.87	0.76
HSD11B1	Hydroxysteroid (11-Beta) Dehydrogenase 1	-3.86	0.71
MGC45806	-	-3.85	0.74
SMS	Spermine Synthase	-3.84	0.86
APOC1	Apolipoprotein C-I	-3.83	0.55
FLJ22875	-	-3.80	0.82
FCGR2B	Fc Fragment Of Igg, Low Affinity Iib, Receptor (Cd32)	-3.80	0.75
SGK	Serum/Glucocorticoid Regulated Kinase	-3.79	0.71
AHCYL1	S-Adenosylhomocysteine Hydrolase-Like 1	-3.78	0.89
RAC2	Ras-Related C3 Botulinum Toxin Substrate 2 (Rho Family, Small Gtp Binding Protein Rac2)	-3.77	0.75
AIF1	Allograft Inflammatory Factor 1	-3.75	0.75
NRP2	Neuropilin 2	-3.75	0.86
RHOQ	Ras Homolog Gene Family, Member Q	-3.74	0.83
THC2364841	-	-3.73	0.80
EFHD2	Ef-Hand Domain Family, Member D2	-3.73	0.82
FN5	Fn5 Protein	-3.73	0.79
NAP1L1	Nucleosome Assembly Protein 1-Like 1	-3.72	0.80
A_24_P264416	-	-3.70	0.82
TPM3	Tropomyosin 3	-3.70	0.84
CR593158	-	-3.68	0.79
SLCO2B1	Solute Carrier Organic Anion Transporter Family, Member 2b1	-3.67	0.68
TRPV2	Vanilloid Receptor-Like Protein 1	-3.67	0.78
CSF1R	Colony Stimulating Factor 1 Receptor, Formerly Mcdonough Feline Sarcoma Viral (V-Fms) Oncogene Homolog	-3.65	0.70
SCPEP1	Serine Carboxypeptidase 1	-3.65	0.85
AF086044	-	-3.64	0.81
ACTB	Actin, Beta	-3.64	0.80
LSP1	Lymphocyte-Specific Protein 1	-3.63	0.75
RAB31	Rab31, Member Ras Oncogene Family	-3.62	0.83
MT1B	Metallothionein 1b (Functional)	-3.62	0.85
PLD3	Phospholipase D Family, Member 3	-3.61	0.74
ENST00000333615	-	-3.61	0.82
ADFP	Adipose Differentiation-Related Protein	-3.61	0.80
BLOC1S2	Biogenesis Of Lysosome-Related Organelles Complex-1, Subunit 2	-3.60	0.84
TXN	Thioredoxin	-3.60	0.80
FUCA1	Fucosidase, Alpha-L- 1, Tissue	-3.60	0.71
MAFB	V-Maf Musculoaponeurotic Fibrosarcoma Oncogene	-3.59	0.74

	Homolog B (Avian)		
CSDE1	Cold Shock Domain Containing E1, Rna-Binding	-3.59	0.85
SYK	Spleen Tyrosine Kinase	-3.56	0.79
FCGR2A	Fc Fragment Of Igg, Low Affinity Iia, Receptor (Cd32)	-3.55	0.83
TRAF3	Tnf Receptor-Associated Factor 3	-3.54	0.88
MARVELD1	Marvel Domain Containing 1	-3.54	0.80
AL122093	-	-3.54	0.81
IL10RA	Interleukin 10 Receptor, Alpha	-3.53	0.71
PAPLN	Papilin, Proteoglycan-Like Sulfated Glycoprotein	-3.52	0.80
ATP6AP1	Atpase, H+ Transporting, Lysosomal Accessory Protein 1	-3.51	0.88
SLC26A11	Solute Carrier Family 26, Member 11	-3.51	0.77
FKSG30	Actin-Like Protein	-3.51	0.80
GAA	Glucosidase, Alpha; Acid (Pompe Disease, Glycogen Storage Disease Type Ii)	-3.51	0.78
CRYL1	Crystallin, Lambda 1	-3.51	0.87
A_24_P255303	-	-3.50	0.88
THC2314600	-	-3.49	0.88
RTN4RL1	Reticulon 4 Receptor-Like 1	-3.49	0.84
FCER1G	Fc Fragment Of Ige, High Affinity I, Receptor For; Gamma Polypeptide	-3.48	0.78
SCRN1	Secernin 1	-3.47	0.81
PERP	Perp, Tp53 Apoptosis Effector	-3.46	0.85
GSTO1	Glutathione S-Transferase Omega 1	-3.46	0.81
CSDE1	Cold Shock Domain Containing E1, Rna-Binding	-3.44	0.87
MAN2B1	Mannosidase, Alpha, Class 2b, Member 1	-3.44	0.85
HLA-DPB1	Major Histocompatibility Complex, Class Ii, Dp Beta 1	-3.43	0.86
PSAP	Prosaposin (Variant Gaucher Disease And Variant Metachromatic Leukodystrophy)	-3.42	0.82
ENST00000303246	-	-3.42	0.86
TXN	Thioredoxin	-3.42	0.83
A_32_P113533	-	-3.42	0.81
GALC	Galactosylceramidase	-3.41	0.85
SLC39A8	Solute Carrier Family 39 (Zinc Transporter), Member 8	-3.41	0.80
C22orf9	Chromosome 22 Open Reading Frame 9	-3.40	0.79
NFYB	Nuclear Transcription Factor Y, Beta	-3.40	0.90
PRKRIR	Protein-Kinase, Interferon-Inducible Double Stranded Rna Dependent Inhibitor, Repressor Of (P58 Repressor)	-3.39	0.87
CREBL2	Camp Responsive Element Binding Protein-Like 2	-3.39	0.86
COLEC11	Collectin Sub-Family Member 11	-3.37	0.81
A_24_P255786	-	-3.37	0.81
THBS1	Thrombospondin 1	-3.37	0.69
RBBP8	Retinoblastoma Binding Protein 8	-3.37	0.87
NFKBIE	Nuclear Factor Of Kappa Light Polypeptide Gene Enhancer In B-Cells Inhibitor, Epsilon	-3.36	0.85
DNAJB6	Dnaj (Hsp40) Homolog, Subfamily B, Member 6	-3.36	0.91
ENST00000327665	-	-3.35	0.85

TNFRSF12A	Tumor Necrosis Factor Receptor Superfamily, Member 12a	-3.35	0.61
LOC147158	Lectin, Galactoside-Binding, Soluble, 9 (Galectin 9) Pseudogene	-3.35	0.85
A_24_P49800	-	-3.34	0.80
FCGBP	Fc Fragment Of Igg Binding Protein	-3.34	0.54
ITIH5	Inter-Alpha (Globulin) Inhibitor H5	-3.34	0.79
UBL3	Ubiquitin-Like 3	-3.33	0.87
NFYB	Nuclear Transcription Factor Y, Beta	-3.33	0.89
MT1L	Metallothionein 1l	-3.33	0.85
ENST00000303830	-	-3.32	0.81
PRG1	Proteoglycan 1, Secretory Granule	-3.32	0.88
-	Cd14 Antigen	-3.32	0.76
THBS1	Thrombospondin 1	-3.32	0.74
DNAJA5	Dnaj Homology Subfamily A Member 5	-3.31	0.89
EDN1	Endothelin 1	-3.31	0.77
ENST00000354530	-	-3.30	0.82
A_24_P161393	-	-3.30	0.81
WDR1	Wd Repeat Domain 1	-3.30	0.86
CKLFSF7	-	-3.30	0.79
SERTAD4	Serta Domain Containing 4	-3.29	0.87
KIAA0251	Kiaa0251 Protein	-3.29	0.90
ARHGAP22	Rho Gtpase Activating Protein 22	-3.28	0.85
TGOLN2	Trans-Golgi Network Protein 2	-3.28	0.87
AK024680	-	-3.27	0.78
PSCD4	Pleckstrin Homology, Sec7 And Coiled-Coil Domains 4	-3.27	0.80
CCRL2	Chemokine (C-C Motif) Receptor-Like 2	-3.26	0.84
AK126405	-	-3.25	0.79
CSDE1	Cold Shock Domain Containing E1, Rna-Binding	-3.25	0.87
ACTC	Actin, Alpha, Cardiac Muscle	-3.25	0.82
C6orf192	Chromosome 6 Open Reading Frame 192	-3.25	0.80
TPM4	Tropomyosin 4	-3.25	0.79
LY96	Lymphocyte Antigen 96	-3.25	0.80
PLEK	Pleckstrin	-3.24	0.79
A_24_P850172	-	-3.24	0.84
APLP2	Amyloid Beta (A4) Precursor-Like Protein 2	-3.24	0.83
HLA-DPB1	Major Histocompatibility Complex, Class Ii, Dp Beta 1	-3.24	0.85
STMN1	Stathmin 1/Oncoprotein 18	-3.23	0.73
FOLR2	Folate Receptor 2 (Fetal)	-3.23	0.74
AK128714	-	-3.22	0.84
MT1A	Metallothionein 1a (Functional)	-3.22	0.88
A_24_P306614	-	-3.22	0.84
FLJ22662	Hypothetical Protein Flj22662	-3.21	0.84
MT2A	Metallothionein 2a	-3.20	0.83
MGC54289	-	-3.19	0.87

ENST00000355670	-	-3.19	0.81
LASS2	Lag1 Longevity Assurance Homolog 2 (S. Cerevisiae)	-3.19	0.89
MRC1L1	Mannose Receptor, C Type 1-Like 1	-3.19	0.75
TRAM1	Translocation Associated Membrane Protein 1	-3.19	0.90
A_24_P187626	-	-3.19	0.80
GP9	Glycoprotein Ix (Platelet)	-3.18	0.89
FTHL7	Ferritin, Heavy Polypeptide-Like 7	-3.18	0.84
VAV1	Vav 1 Oncogene	-3.18	0.85
RBPSUH	Recombining Binding Protein Suppressor Of Hairless (Drosophila)	-3.17	0.88
C1QA	Complement Component 1, Q Subcomponent, A Chain	-3.17	0.72
A_24_P753760	-	-3.17	0.84
ACTR3	Arp3 Actin-Related Protein 3 Homolog (Yeast)	-3.16	0.87
C1QB	Complement Component 1, Q Subcomponent, B Chain	-3.15	0.70
BAG3	Bcl2-Associated Athanogene 3	-3.15	0.85
ITGB1BP1	Integrin Beta 1 Binding Protein 1	-3.14	0.84
ARRDC4	Arrestin Domain Containing 4	-3.13	0.85
LY86	Lymphocyte Antigen 86	-3.13	0.78
RAB7B	Hypothetical Protein Mgc16212	-3.13	0.80
CFHL1	Complement factor H-related 1	-3.13	0.82
MERTK	C-Mer Proto-Oncogene Tyrosine Kinase	-3.12	0.79
pp9099	-	-3.12	0.83
ZMYND15	Zinc Finger, Mynd-Type Containing 15	-3.11	0.81
COLEC11	Collectin Sub-Family Member 11	-3.11	0.77
AKR1B1	Aldo-Keto Reductase Family 1, Member B1 (Aldose Reductase)	-3.11	0.87
IER5	Immediate Early Response 5	-3.10	0.85
C1orf149	Chromosome 1 Open Reading Frame 149	-3.09	0.90
A_24_P58647	-	-3.09	0.88
RAB31	Rab31, Member Ras Oncogene Family	-3.09	0.82
SDC4	Syndecan 4 (Amphiglycan, Ryudocan)	-3.08	0.88
C7	Complement Component 7	-3.07	0.83
SRPX2	Sushi-Repeat-Containing Protein, X-Linked 2	-3.07	0.73
PTPNS1	Protein Tyrosine Phosphatase, Non-Receptor Type Substrate 1	-3.06	0.84
-	Extracellular Link Domain Containing 1	-3.06	0.75
GMIP	Gem Interacting Protein	-3.05	0.88
SNX10	Sorting Nexin 10	-3.05	0.81
TDRD7	Tudor Domain Containing 7	-3.05	0.91
C21orf25	Chromosome 21 Open Reading Frame 25	-3.04	0.85
EPB41L4B	Erythrocyte Membrane Protein Band 4.1 Like 4b	-3.04	0.80
A_24_P383901	-	-3.03	0.83
SCARB2	Scavenger Receptor Class B, Member 2	-3.02	0.87
MT1G	Metallothionein 1g	-3.01	0.84
IL10RA	Interleukin 10 Receptor, Alpha	-3.00	0.81

FCHO2	Fch Domain Only 2	-3.00	0.90
MT1H	Metallothionein 1h	-3.00	0.87
BDKRB2	Bradykinin Receptor B2	-2.99	0.85
PLEKHA1	Pleckstrin Homology Domain Containing, Family A (Phosphoinositide Binding Specific) Member 1	-2.98	0.89
IQGAP2	Iq Motif Containing Gtpase Activating Protein 2	-2.97	0.81
ACSL4	Acyl-Coa Synthetase Long-Chain Family Member 4	-2.97	0.92
CKLFSF3	CKLF-like MARVEL transmembrane domain containing 3	-2.97	0.80
BMP6	Bone Morphogenetic Protein 6	-2.97	0.84
TPM4	Tropomyosin 4	-2.96	0.80
PYCARD	Pyd And Card Domain Containing	-2.96	0.83
AQP3	Aquaporin 3 (Gill Blood Group)	-2.96	0.82
GALNACT-2	Chondroitin Sulfate Galnact-2	-2.96	0.89
LYPLA3	Lysophospholipase 3 (Lysosomal Phospholipase A2)	-2.96	0.88
BC030112	-	-2.95	0.90
ADAM9	Adam Metallopeptidase Domain 9 (Meltrin Gamma)	-2.95	0.77
BRI3	Brain Protein I3	-2.95	0.87
RHEB	Ras Homolog Enriched In Brain	-2.94	0.86
ITIH5	Inter-Alpha (Globulin) Inhibitor H5	-2.94	0.77
S100A10	S100 Calcium Binding Protein A10 (Annexin Ii Ligand, Calpactin I, Light Polypeptide (P11))	-2.94	0.76
MCL1	Myeloid Cell Leukemia Sequence 1 (Bcl2-Related)	-2.94	0.87
PPT1	Palmitoyl-Protein Thioesterase 1 (Ceroid-Lipofuscinosis, Neuronal 1, Infantile)	-2.94	0.79
C22orf9	Chromosome 22 Open Reading Frame 9	-2.93	0.84
TPM3	Tropomyosin 3	-2.93	0.88
SLITL2	Slit-Like 2 (Drosophila)	-2.93	0.80
C2	Complement Component 2	-2.93	0.77
ARPC1B	Actin Related Protein 2/3 Complex, Subunit 1b, 41kda	-2.92	0.84
STCH	Stress 70 Protein Chaperone, Microsome-Associated, 60kda	-2.92	0.88
ENST00000245185	-	-2.91	0.84
SH3BGRL3	Sh3 Domain Binding Glutamic Acid-Rich Protein Like 3	-2.91	0.83
CTSZ	Cathepsin Z	-2.91	0.79
SCUBE2	Signal Peptide, Cub Domain, Egf-Like 2	-2.91	0.85
FEZ1	Fasciculation And Elongation Protein Zeta 1 (Zygin I)	-2.90	0.89
TUBA6	Tubulin, Alpha, Ubiquitous	-2.90	0.85
MR1	Major Histocompatibility Complex, Class I-Related	-2.90	0.89
CYP1B1	Cytochrome P450, Family 1, Subfamily B, Polypeptide 1	-2.90	0.77
LEPR	Leptin Receptor	-2.89	0.84
EPB41L2	Erythrocyte Membrane Protein Band 4.1-Like 2	-2.88	0.88
CKLFSF6	-	-2.88	0.89
COMMD8	Comm Domain Containing 8	-2.88	0.90
FDX1	Ferredoxin 1	-2.88	0.87
PLA2G4C	Phospholipase A2, Group Ivc (Cytosolic, Calcium-Independent)	-2.88	0.88
HPRT1	Hypoxanthine Phosphoribosyltransferase 1 (Lesch-Nyhan	-2.87	0.85

	Syndrome)		
MAN2B2	Mannosidase, Alpha, Class 2b, Member 2	-2.87	0.90
A_24_P247175	-	-2.87	0.85
VAT1	Vesicle Amine Transport Protein 1 Homolog (T Californica)	-2.87	0.83
ACTB	Actin, Beta	-2.86	0.81
GTDC1	Pro0159 Protein	-2.85	0.86
MAN2B1	Mannosidase, Alpha, Class 2b, Member 1	-2.85	0.81
BE926212	-	-2.85	0.90
TPM4	Tropomyosin 4	-2.84	0.80
IL15	Interleukin 15	-2.83	0.93
MTR	5-Methyltetrahydrofolate-Homocysteine Methyltransferase	-2.83	0.89
WASPIP	Wiskott-Aldrich Syndrome Protein Interacting Protein	-2.83	0.87
SLA	Src-Like-Adaptor	-2.83	0.78
A_24_P110591	-	-2.83	0.90
HTRA3	Htra Serine Peptidase 3	-2.83	0.67
C16orf45	Chromosome 16 Open Reading Frame 45	-2.82	0.92
TMED9	Transmembrane Emp24 Protein Transport Domain Containing 9	-2.81	0.89
CIDEA	Cell Death-Inducing Dffa-Like Effector A	-2.81	0.82
RSNL2	Restin-Like 2	-2.81	0.85
MT1X	Metallothionein 1x	-2.81	0.87
SPFH1	Spfh Domain Family, Member 1	-2.81	0.90
CMPK	Cytidylate Kinase	-2.79	0.88
KIAA1212	Hypothetical Protein Loc55580	-2.79	0.78
MT1K	metallothionein 1M	-2.78	0.87
FHL1	Four And A Half Lim Domains 1	-2.78	0.69
CKIP-1	Pleckstrin homology domain containing, family O member 1	-2.77	0.80
CYBRD1	Cytochrome B Reductase 1	-2.77	0.85
CR620010	-	-2.77	0.86
IMMP2L	Imp2 Inner Mitochondrial Membrane Peptidase-Like (S. Cerevisiae)	-2.77	0.92
CCL2	Chemokine (C-C Motif) Ligand 2	-2.77	0.71
MAP2K3	Mitogen-Activated Protein Kinase Kinase 3	-2.77	0.88
RHOQ	Ras Homolog Gene Family, Member Q	-2.76	0.82
CREG1	Cellular Repressor Of E1a-Stimulated Genes 1	-2.75	0.87
KIAA0433	-	-2.74	0.91
HLA-DRB5	Major Histocompatibility Complex, Class Ii, Dr Beta 1	-2.74	0.86
HLA-DMA	Major Histocompatibility Complex, Class Ii, Dm Alpha	-2.73	0.88
AMPD3	Adenosine Monophosphate Deaminase (Isoform E)	-2.73	0.82
LAMP1	Lysosomal-Associated Membrane Protein 1	-2.73	0.88
RPS6KA1	Ribosomal Protein S6 Kinase, 90kda, Polypeptide 1	-2.73	0.82
BU732811	-	-2.73	0.90
AL833309	-	-2.73	0.78
ENST00000303830	-	-2.72	0.86
CAP1	Cap, Adenylate Cyclase-Associated Protein 1 (Yeast)	-2.72	0.87

ITIH5	Inter-Alpha (Globulin) Inhibitor H5	-2.72	0.84
PPGB	Protective Protein For Beta-Galactosidase (Galactosialidosis)	-2.72	0.91
MAFG	V-Maf Musculoaponeurotic Fibrosarcoma Oncogene Homolog G (Avian)	-2.72	0.87
FLJ22457	-	-2.72	0.89
TPT1	Tumor Protein, Translationally-Controlled 1	-2.72	0.93
CPEB4	Cytoplasmic Polyadenylation Element Binding Protein 4	-2.71	0.87
KIAA1212	Hypothetical Protein Loc55580	-2.71	0.80
A_32_P101860	-	-2.70	0.88
ARPC5	Actin Related Protein 2/3 Complex, Subunit 5, 16kda	-2.70	0.86
THC2317110	-	-2.70	0.88
C1QG	Complement component 1, q subcomponent, C chain	-2.70	0.77
WDR1	Wd Repeat Domain 1	-2.70	0.90
FOLR2	Folate Receptor 2 (Fetal)	-2.70	0.81
CASP7	Caspase 7, Apoptosis-Related Cysteine Peptidase	-2.69	0.92
RRAS2	Related Ras Viral (R-Ras) Oncogene Homolog 2	-2.69	0.77
CD33	Cd33 Antigen (Gp67)	-2.69	0.83
HLA-DMA	Major Histocompatibility Complex, Class Ii, Dm Alpha	-2.69	0.83
MYD88	Myeloid Differentiation Primary Response Gene (88)	-2.68	0.83
A_32_P157671	-	-2.68	0.85
LOC93081	-	-2.67	0.90
PRDX1	Peroxiredoxin 1	-2.67	0.87
ENST00000332444	-	-2.67	0.89
SLC25A24	Solute Carrier Family 25 (Mitochondrial Carrier; Phosphate Carrier), Member 24	-2.66	0.89
CASC4	Cancer Susceptibility Candidate 4	-2.66	0.90
COL8A2	Collagen, Type Viii, Alpha 2	-2.66	0.87
TMEM16C	Transmembrane Protein 16c	-2.66	0.83
MAN2B2	Mannosidase, Alpha, Class 2b, Member 2	-2.65	0.89
C18orf10	Chromosome 18 Open Reading Frame 10	-2.64	0.86
RALBP1	Rala Binding Protein 1	-2.63	0.88
PCBP1	Poly(Rc) Binding Protein 1	-2.62	0.89
TRIM47	Tripartite Motif-Containing 47	-2.62	0.90
ESRRBL1	Intraflagellar transport 57 homolog (Chlamydomonas)	-2.61	0.93
S100A4	S100 Calcium Binding Protein A4 (Calcium Protein, Calvasculin, Metastasin, Murine Placental Homolog)	-2.60	0.80
SEMA3B	Sema Domain, Immunoglobulin Domain (Ig), Short Basic Domain, Secreted, (Semaphorin) 3b	-2.60	0.85
KIAA1212	Hypothetical Protein Loc55580	-2.60	0.79
C21orf18	-	-2.60	0.92
TAGLN	Transgelin	-2.59	0.82
EXT1	Exostoses (Multiple) 1	-2.59	0.90
TPM3	Tropomyosin 3	-2.58	0.88
A_24_P409750	-	-2.58	0.90
SEMA3B	Sema Domain, Immunoglobulin Domain (Ig), Short Basic Domain, Secreted, (Semaphorin) 3b	-2.58	0.84

PPRC1	Peroxisome Proliferative Activated Receptor, Gamma, Coactivator-Related 1	-2.58	0.88
ENST00000238256	-	-2.57	0.89
A_24_P578445	-	-2.57	0.88
A_24_P835388	-	-2.57	0.84
MAT2A	Methionine Adenosyltransferase Ii, Alpha	-2.57	0.85
SLC24A6	Solute Carrier Family 24 (Sodium/Potassium/Calcium Exchanger), Member 6	-2.56	0.87
ENST00000354185	-	-2.56	0.89
PCGF4	Polycomb Group Ring Finger 4	-2.55	0.90
DDX48	Dead (Asp-Glu-Ala-Asp) Box Polypeptide 48	-2.54	0.90
RHOQ	Ras Homolog Gene Family, Member Q	-2.54	0.84
TPK1	Thiamin Pyrophosphokinase 1	-2.54	0.90
HSPH1	Heat Shock 105kda/110kda Protein 1	-2.54	0.84
DAB2	Disabled Homolog 2, Mitogen-Responsive Phosphoprotein (Drosophila)	-2.54	0.84
MGAT3	Mannosyl (Beta-1,4-)-Glycoprotein Beta-1,4-N-Acetylglucosaminyltransferase	-2.53	0.88
ACTR3	Arp3 Actin-Related Protein 3 Homolog (Yeast)	-2.51	0.88
MASA	E-1 Enzyme	-2.51	0.90
TUBA6	Tubulin, Alpha, Ubiquitous	-2.51	0.85
C18orf37	Chromosome 18 Open Reading Frame 37	-2.50	0.92
TTRAP	Traf And Tnf Receptor Associated Protein	-2.50	0.90
C18orf10	Chromosome 18 Open Reading Frame 10	-2.50	0.86
ATP6AP2	Atpase, H+ Transporting, Lysosomal Accessory Protein 2	-2.50	0.87
HS6ST1	Heparan Sulfate 6-O-Sulfotransferase 1	-2.50	0.89
NFE2L1	Nuclear Factor (Erythroid-Derived 2)-Like 1	-2.49	0.89
PORIMIN	Transmembrane protein 123	-2.49	0.89
A_24_P110601	-	-2.49	0.84
TPM3	Tropomyosin 3	-2.49	0.91
C2	Complement Component 2	-2.48	0.84
KIAA1212	Hypothetical Protein Loc55580	-2.48	0.86
CN272797	-	-2.48	0.88
A_24_P230457	-	-2.47	0.91
CYP26B1	Cytochrome P450, Family 26, Subfamily B, Polypeptide 1	-2.47	0.80
EIF5B	Eukaryotic Translation Initiation Factor 5b	-2.47	0.93
BACH1	Btb And Cnc Homology 1, Basic Leucine Zipper Transcription Factor 1	-2.47	0.92
MAF	V-Maf Musculoaponeurotic Fibrosarcoma Oncogene Homolog (Avian)	-2.47	0.86
PIR	Pirin (Iron-Binding Nuclear Protein)	-2.47	0.89
AL117621	-	-2.47	0.91
A_23_P57836	-	-2.47	0.87
MDS025	Hypothetical Protein Mds025	-2.46	0.92
TPM3	Tropomyosin 3	-2.46	0.87
MAN2A2	Mannosidase, Alpha, Class 2a, Member 2	-2.46	0.87

GADD45A	Growth Arrest And Dna-Damage-Inducible, Alpha	-2.46	0.86
NAGK	N-Acetylglucosamine Kinase	-2.46	0.88
KIAA1212	Hypothetical Protein Loc55580	-2.46	0.79
THC2365247	-	-2.45	0.86
SYNPO2	Synaptopodin 2	-2.45	0.82
KIAA1212	Hypothetical Protein Loc55580	-2.45	0.80
KIAA1212	Hypothetical Protein Loc55580	-2.45	0.84
TPM3	Tropomyosin 3	-2.45	0.87
FLJ11259	Hypothetical Protein Flj11259	-2.45	0.88
FLJ21908	Hypothetical Protein Flj21908	-2.44	0.91
MT1H	Metallothionein 1h	-2.44	0.88
CLIC1	Chloride Intracellular Channel 1	-2.44	0.89
APLP2	Amyloid Beta (A4) Precursor-Like Protein 2	-2.44	0.83
MAN2A2	Mannosidase, Alpha, Class 2a, Member 2	-2.43	0.86
A_32_P100338	-	-2.42	0.90
RAB20	Rab20, Member Ras Oncogene Family	-2.42	0.89
SREBF2	Sterol Regulatory Element Binding Transcription Factor 2	-2.41	0.88
MTPN	Myotrophin	-2.41	0.91
ATP13A3	Atpase Type 13a3	-2.40	0.86
ATF4	Activating Transcription Factor 4 (Tax-Responsive Enhancer Element B67)	-2.40	0.89
HRMT1L1	Protein arginine methyltransferase 2	-2.40	0.92
TMEM32	Transmembrane Protein 32	-2.40	0.91
CTSC	Cathepsin C	-2.40	0.83
WHSC1	Wolf-Hirschhorn Syndrome Candidate 1	-2.40	0.92
CGREF1	Cell Growth Regulator With Ef-Hand Domain 1	-2.40	0.87
CENTA2	Centaurin, Alpha 2	-2.40	0.79
DKFZP434K1421	-	-2.40	0.91
ARHGAP21	Rho Gtpase Activating Protein 21	-2.39	0.88
PTPRE	Protein Tyrosine Phosphatase, Receptor Type, E	-2.39	0.85
KIAA1212	Hypothetical Protein Loc55580	-2.39	0.80
AK097266	-	-2.39	0.84
ACTR3	Arp3 Actin-Related Protein 3 Homolog (Yeast)	-2.39	0.91
DLC1	Deleted In Liver Cancer 1	-2.39	0.85
MGAT1	Mannosyl (Alpha-1,3-)-Glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase	-2.39	0.86
LUM	Lumican	-2.39	0.74
DSCR1	Down Syndrome Critical Region Gene 1	-2.39	0.90
TCIRG1	T-Cell, Immune Regulator 1, Atpase, H+ Transporting, Lysosomal V0 Subunit A3	-2.39	0.82
LYAR	Hypothetical Protein Flj20425	-2.38	0.92
FLJ35696	-	-2.37	0.88
TMCO3	Transmembrane And Coiled-Coil Domains 3	-2.37	0.92
HLA-DPB2	Major Histocompatibility Complex, Class Ii, Dp Beta 2 (Pseudogene)	-2.37	0.90
MEST	Mesoderm Specific Transcript Homolog (Mouse)	-2.37	0.77

ASPN	Asporin (Lrr Class 1)	-2.36	0.87
TGFBI	Transforming Growth Factor, Beta-Induced, 68kda	-2.36	0.81
NSMAF	Neutral Sphingomyelinase (N-Smase) Activation Associated Factor	-2.36	0.91
HLA-DPA1	Major Histocompatibility Complex, Class Ii, Dp Alpha 1	-2.35	0.88
SLC43A3	Solute Carrier Family 43, Member 3	-2.35	0.87
A_24_P273245	-	-2.35	0.92
DDX18	Dead (Asp-Glu-Ala-Asp) Box Polypeptide 18	-2.35	0.92
MAPKAP1	Mitogen-Activated Protein Kinase Associated Protein 1	-2.35	0.88
TMEM24	Transmembrane Protein 24	-2.35	0.93
MPEG1	Macrophage Expressed Gene 1	-2.34	0.83
DEXI	Dexamethasone-Induced Transcript	-2.34	0.93
CB049198	-	-2.34	0.87
APPBP1	Amyloid Beta Precursor Protein Binding Protein 1	-2.34	0.94
GNA13	Guanine Nucleotide Binding Protein (G Protein), Alpha 13	-2.34	0.88
SACS	Spastic Ataxia Of Charlevoix-Saguenay (Sacsin)	-2.34	0.93
ENST00000333604	-	-2.34	0.89
ADRB2	Adrenergic, Beta-2-, Receptor, Surface	-2.33	0.88
BAG3	Bcl2-Associated Athanogene 3	-2.33	0.82
ENST00000332097	-	-2.33	0.88
A_23_P331087	-	-2.33	0.91
MT1J	MTB	-2.32	0.90
HABP4	Hyaluronan Binding Protein 4	-2.31	0.88
HLA-DOA	Major Histocompatibility Complex, Class Ii, Do Alpha	-2.31	0.87
A_24_P349869	-	-2.31	0.85
THBS2	Thrombospondin 2	-2.31	0.81
ALOX5AP	Arachidonate 5-Lipoxygenase-Activating Protein	-2.31	0.86
HCLS1	Hematopoietic Cell-Specific Lyn Substrate 1	-2.30	0.88
FNDC4	Fibronectin Type Iii Domain Containing 4	-2.30	0.89
NUDT4	Nudix (Nucleoside Diphosphate Linked Moiety X)-Type Motif 4	-2.30	0.90
FAM3C	Family With Sequence Similarity 3, Member C	-2.30	0.87
MBNL2	Muscleblind-Like 2 (Drosophila)	-2.30	0.89
EGR1	Early Growth Response 1	-2.30	0.77
PNRC2	Proline-Rich Nuclear Receptor Coactivator 2	-2.29	0.91
GLB1	Galactosidase, Beta 1	-2.28	0.85
FAM14A	Family With Sequence Similarity 14, Member A	-2.28	0.90
RND3	Rho Family Gtpase 3	-2.28	0.83
TMEM8	Transmembrane Protein 8 (Five Membrane-Spanning Domains)	-2.28	0.92
CKLFSF6	-	-2.28	0.90
ARF6	Adp-Ribosylation Factor 6	-2.27	0.91
DKFZP564J102	Dkfzp564j102 Protein	-2.27	0.90
DIRC2	Disrupted In Renal Carcinoma 2	-2.27	0.91
WDR21A	Wd Repeat Domain 21a	-2.27	0.92

BC072415	-	-2.27	0.91
UXS1	Udp-Glucuronate Decarboxylase 1	-2.27	0.90
SH3D19	Sh3 Domain Protein D19	-2.26	0.86
RGL1	Ral Guanine Nucleotide Dissociation Stimulator-Like 1	-2.26	0.87
BEXL1	Brain Expressed X-Linked-Like 1	-2.26	0.92
A_32_P148407	-	-2.26	0.87
FAM3C	Family With Sequence Similarity 3, Member C	-2.26	0.89
COL6A2	Collagen, Type Vi, Alpha 2	-2.26	0.87
ST3GAL4	St3 Beta-Galactoside Alpha-2,3-Sialyltransferase 4	-2.25	0.88
PDGFC	Spinal Cord-Derived Growth Factor; Secretory Growth Factor-Like Protein Fallotein	-2.25	0.91
C2orf18	Chromosome 2 Open Reading Frame 18	-2.25	0.87
A_24_P871726	-	-2.25	0.93
COMTD1	Catechol-O-Methyltransferase Domain Containing 1	-2.25	0.92
YPEL4	Yippee-Like 4 (Drosophila)	-2.25	0.87
CYBB	Cytochrome B-245, Beta Polypeptide (Chronic Granulomatous Disease)	-2.24	0.81
TK1	Thymidine Kinase 1, Soluble	-2.24	0.77
CHSY1	Carbohydrate (Chondroitin) Synthase 1	-2.24	0.86
THC2364880	-	-2.24	0.88
LOC400890	Hypothetical Loc400890	-2.24	0.88
FBXW4	F-Box And Wd-40 Domain Protein 4	-2.24	0.91
C14orf10	Chromosome 14 Open Reading Frame 10	-2.23	0.92
ANXA4	Annexin A4	-2.23	0.87
C11orf15	-	-2.23	0.91
DLC1	Deleted In Liver Cancer 1	-2.23	0.86
SFRP4	Secreted Frizzled-Related Protein 4	-2.23	0.83
HIF1A	Hypoxia-Inducible Factor 1, Alpha Subunit (Basic Helix-Loop-Helix Transcription Factor)	-2.23	0.91
KIAA1212	Hypothetical Protein Loc55580	-2.23	0.80
CAMKK2	Calcium/Calmodulin-Dependent Protein Kinase Kinase 2, Beta	-2.23	0.90
SNX2	Sorting Nexin 2	-2.23	0.91
SOCS3	Suppressor Of Cytokine Signaling 3	-2.23	0.81
A_23_P347100	-	-2.23	0.90
CAB39	Calcium Binding Protein 39	-2.23	0.86
AZIN1	Antizyme Inhibitor 1	-2.23	0.90
ENPP2	Ectonucleotide Pyrophosphatase/Phosphodiesterase 2 (Autotaxin)	-2.22	0.82
CR593492	-	-2.22	0.86
CYP51A1	Cytochrome P450, Family 51, Subfamily A, Polypeptide 1	-2.22	0.87
GPR34	G Protein-Coupled Receptor 34	-2.22	0.85
TUBA6	Tubulin, Alpha, Ubiquitous	-2.21	0.88
METTL1	Methyltransferase Like 1	-2.21	0.90
SLC16A5	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 5	-2.21	0.86

FZD1	Frizzled Homolog 1 (Drosophila)	-2.21	0.90
RCN1	Reticulocalbin 1, Ef-Hand Calcium Binding Domain	-2.21	0.89
PCDH9	Protocadherin 9	-2.21	0.88
CENTD2	Centaurin, Delta 2	-2.21	0.89
M27126	-	-2.20	0.88
WDR44	Wd Repeat Domain 44	-2.20	0.94
AK098629	-	-2.20	0.93
BC039246	-	-2.20	0.90
HLA-DQB1	Major Histocompatibility Complex, Class Ii, Dq Beta 1	-2.19	0.89
ENST00000308384	-	-2.19	0.89
LILRB2	Leukocyte Immunoglobulin-Like Receptor, Subfamily B (With Tm And Itim Domains), Member 2	-2.19	0.85
IQGAP1	Iq Motif Containing Gtpase Activating Protein 1	-2.19	0.88
KIAA0433	-	-2.18	0.91
H2-ALPHA	Alpha-Tubulin Isotype H2-Alpha	-2.18	0.89
MGC54289	-	-2.18	0.87
LOC493856	Similar To Riken Cdna 1500009m05 Gene	-2.18	0.90
GALM	Galactose Mutarotase (Aldose 1-Epimerase)	-2.18	0.90
SENP6	Sumo1/Sentrin Specific Peptidase 6	-2.18	0.93
DDAH1	Dimethylarginine Dimethylaminohydrolase 1	-2.18	0.88
PTGER2	Prostaglandin E Receptor 2 (Subtype Ep2), 53kda	-2.17	0.82
TMEM23	Transmembrane Protein 23	-2.17	0.89
ASTN2	Astrotactin 2	-2.17	0.90
DNAJA1	Dnaj (Hsp40) Homolog, Subfamily A, Member 1	-2.17	0.91
ARHGEF6	Rac/Cdc42 Guanine Nucleotide Exchange Factor (Gef) 6	-2.17	0.87
KLF6	Kruppel-Like Factor 6	-2.16	0.90
THC2372563	-	-2.16	0.86
CBR3	Carbonyl Reductase 3	-2.16	0.89
ZNF295	Zinc Finger Protein 295	-2.15	0.90
GADD45B	Growth Arrest And Dna-Damage-Inducible, Beta	-2.15	0.89
PCK2	Phosphoenolpyruvate Carboxykinase 2 (Mitochondrial)	-2.15	0.89
TXNDC5	Thioredoxin Domain Containing 5	-2.15	0.90
ARHGAP10	Rho Gtpase Activating Protein 10	-2.15	0.91
NIN	Ninein (Gsk3b Interacting Protein)	-2.14	0.93
SNX10	Sorting Nexin 10	-2.14	0.85
DNAJB6	Dnaj (Hsp40) Homolog, Subfamily B, Member 6	-2.14	0.94
RABEP1	Rabaptin, Rab Gtpase Binding Effector Protein 1	-2.14	0.93
MTCH1	Mitochondrial Carrier Homolog 1 (C. Elegans)	-2.14	0.91
SRD5A2L	Steroid 5 Alpha-Reductase 2-Like	-2.14	0.91
THC2370530	-	-2.13	0.92
SLAMF9	Slam Family Member 9	-2.13	0.86
ENST00000163282	-	-2.12	0.92
TLR4	Toll-Like Receptor 4	-2.12	0.90
GARS	Glycyl-Trna Synthetase	-2.12	0.91

APH1B	Anterior Pharynx Defective 1 Homolog B (C. Elegans)	-2.12	0.89
TUBA3	Tubulin, Alpha 3	-2.12	0.88
RNH1	Ribonuclease/Angiogenin Inhibitor 1	-2.11	0.89
ANPEP	Alanyl (Membrane) Aminopeptidase (Aminopeptidase N, Aminopeptidase M, Microsomal Aminopeptidase, Cd13, P150)	-2.11	0.91
CDR2	Cerebellar Degeneration-Related Protein 2, 62kda	-2.11	0.91
CFH	Complement Factor H	-2.10	0.90
FLJ11000	Hypothetical Protein Flj11000	-2.10	0.90
PLEKHB2	Pleckstrin Homology Domain Containing, Family B (Evectins) Member 2	-2.09	0.91
HLA-DRA	Major Histocompatibility Complex, Class Ii, Dr Alpha	-2.09	0.87
Weight Stabilization (WS)	***Up Regulated Genes***		
LOC92162	-	7.73	1.33
TF	Transferrin	6.98	1.85
LGALS12	Lectin, Galactoside-Binding, Soluble, 12 (Galectin 12)	6.61	1.53
FMOD	Fibromodulin	6.37	1.69
AQP1	Aquaporin 1 (Colton Blood Group)	5.97	1.35
SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	5.70	1.95
SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	5.39	2.55
IRS1	Insulin Receptor Substrate 1	5.25	1.45
ADPN	Adiponutrin	5.21	1.68
ITGA6	Integrin, Alpha 6	5.13	1.23
THBS4	Thrombospondin 4	5.03	2.25
SLC16A7	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 7	4.99	1.37
THC2403797	-	4.84	1.56
SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	4.79	1.50
SHMT1	Serine Hydroxymethyltransferase 1 (Soluble)	4.77	1.22
GPAM	Glycerol-3-Phosphate Acyltransferase, Mitochondrial	4.69	1.56
LDHD	Lactate Dehydrogenase D	4.67	1.42
SNTB2	Syntrophin, Beta 2 (Dystrophin-Associated Protein A1, 59kda, Basic Component 2)	4.57	1.22
BC000206	-	4.44	1.38
ALDOC	Aldolase C, Fructose-Bisphosphate	4.41	1.61
CDKN2C	Cyclin-Dependent Kinase Inhibitor 2c (P18, Inhibits Cdk4)	4.39	1.62
CICE	Cell Death-Inducing Cide-Like Effector Pseudogene	4.30	1.33
TNN	Tenascin N	4.26	1.36
FADS2	Fatty Acid Desaturase 2	4.25	2.29
CXCL14	Chemokine (C-X-C Motif) Ligand 14	4.23	1.35
SVEP1	Sushi, Von Willebrand Factor Type A, Egf And Pentraxin Domain Containing 1	4.23	1.13
C20orf7	Chromosome 20 Open Reading Frame 7	4.21	1.70
MGC35097	-	4.20	1.27
PTPLB	Protein Tyrosine Phosphatase-Like (Proline Instead Of	4.19	1.57

	Catalytic Arginine), Member B		
ECHDC1	Enoyl Coenzyme A Hydratase Domain Containing 1	4.15	1.45
GLUL	Glutamate-Ammonia Ligase (Glutamine Synthetase)	4.12	1.50
ADRBK2	Adrenergic, Beta, Receptor Kinase 2	4.09	1.27
COMP	Cartilage Oligomeric Matrix Protein	4.07	1.75
THC2374684	-	4.06	1.19
CHP	Calcium Binding Protein P22	4.05	1.19
CIDEC	Cell Death-Inducing Dffa-Like Effector C	4.02	1.28
MMP15	Matrix Metallopeptidase 15 (Membrane-Inserted)	4.01	1.31
PHKA2	Phosphorylase Kinase, Alpha 2 (Liver)	3.99	1.14
TUBA8	Tubulin, Alpha 8	3.98	1.35
APBB1IP	Amyloid Beta (A4) Precursor Protein-Binding, Family B, Member 1 Interacting Protein	3.97	1.26
FANCE	Fanconi Anemia, Complementation Group E	3.93	1.25
GPT	Glutamic-Pyruvate Transaminase (Alanine Aminotransferase)	3.93	1.17
MCF2L	Mcf.2 Cell Line Derived Transforming Sequence-Like	3.90	1.34
BPHL	Biphenyl Hydrolase-Like (Serine Hydrolase; Breast Epithelial Mucin-Associated Antigen)	3.89	1.22
S100B	S100 Calcium Binding Protein, Beta (Neural)	3.84	1.54
SAA4	Serum Amyloid A4, Constitutive	3.83	1.69
CSPG4	Chondroitin Sulfate Proteoglycan 4 (Melanoma-Associated)	3.80	1.16
GJA4	Gap Junction Protein, Alpha 4, 37kda (Connexin 37)	3.79	1.20
PLVAP	Plasmalemma Vesicle Associated Protein	3.79	1.26
SAA4	Serum Amyloid A4, Constitutive	3.79	1.61
LRIG1	Leucine-Rich Repeats And Immunoglobulin-Like Domains 1	3.78	1.28
GLYAT	Glycine-N-Acyltransferase	3.78	1.38
SAA4	Serum Amyloid A4, Constitutive	3.78	1.68
ELP3	Elongation Protein 3 Homolog (S. Cerevisiae)	3.77	1.14
EPB41L1	Erythrocyte Membrane Protein Band 4.1-Like 1	3.77	1.32
BC035751	-	3.76	1.18
THC2337324	-	3.74	1.19
OPLAH	5-Oxoprolinase (Atp-Hydrolysing)	3.73	1.20
DCBLD1	Discoidin, Cub And Lccl Domain Containing 1	3.72	1.19
LAMA5	Laminin, Alpha 5	3.72	1.18
PXMP2	Peroxisomal Membrane Protein 2, 22kda	3.70	1.25
SAA4	Serum Amyloid A4, Constitutive	3.70	1.54
BCKDHB	Branched Chain Keto Acid Dehydrogenase E1, Beta Polypeptide (Maple Syrup Urine Disease)	3.69	1.17
ACAS2	Acyl-CoA synthetase short-chain family member 2	3.69	1.36
GLYAT	Glycine-N-Acyltransferase	3.68	1.28
PLEKHG5	Pleckstrin Homology Domain Containing, Family G (With Rhogef Domain) Member 5	3.68	1.43
NID2	Nidogen 2 (Osteonidogen)	3.67	1.27
MME	Membrane Metallo-Endopeptidase (Neutral Endopeptidase, Enkephalinase, Calla, Cd10)	3.66	1.45

SAA4	Serum Amyloid A4, Constitutive	3.63	1.65
AACS	Acetoacetyl-Coa Synthetase	3.62	1.35
SFRP2	Secreted Frizzled-Related Protein 2	3.62	1.37
FLJ37478	Hypothetical Protein Loc339983	3.60	1.37
PDHA1	Pyruvate Dehydrogenase (Lipoamide) Alpha 1	3.57	1.38
AK022629	-	3.55	1.41
HEYL	Hairy/Enhancer-Of-Split Related With Yrpw Motif-Like	3.55	1.26
DGAT2	Diacylglycerol O-Acyltransferase Homolog 2 (Mouse)	3.52	1.63
MOSC2	Moco Sulphurase C-Terminal Domain Containing 2	3.52	1.18
PDCD8	Programmed Cell Death 8 (Apoptosis-Inducing Factor)	3.50	1.20
SAA4	Serum Amyloid A4, Constitutive	3.50	1.51
AF271776	-	3.48	1.35
A_32_P133926	-	3.47	1.35
LOC152831	-	3.45	1.53
BQ897248	-	3.45	1.19
UQCRC2	Ubiquinol-Cytochrome C Reductase Core Protein Ii	3.45	1.15
AR	Androgen Receptor (Dihydrotestosterone Receptor; Testicular Feminization; Spinal And Bulbar Muscular Atrophy; Kennedy Disease)	3.43	1.30
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)	3.43	1.42
MME	Membrane Metallo-Endopeptidase (Neutral Endopeptidase, Enkephalinase, Calla, Cd10)	3.43	1.36
HSPA12B	Heat Shock 70kd Protein 12b	3.42	1.29
ELOVL5	Elovl Family Member 5, Elongation Of Long Chain Fatty Acids (Fen1/Elo2, Sur4/Elo3-Like, Yeast)	3.41	1.50
PPP1R16A	Protein Phosphatase 1, Regulatory (Inhibitor) Subunit 16a	3.39	1.20
AGT	Angiotensinogen (Serpin Peptidase Inhibitor, Clade A, Member 8)	3.37	1.45
A_32_P128399	-	3.36	1.24
A_32_P331700	-	3.35	1.24
THRSP	Thyroid Hormone Responsive (Spot14 Homolog, Rat)	3.34	1.38
TNS1	Tensin 1	3.34	1.17
RHPN1	Rhophilin, Rho Gtpase Binding Protein 1	3.34	1.21
DGAT2	Diacylglycerol O-Acyltransferase Homolog 2 (Mouse)	3.34	1.71
PLK2	Polo-Like Kinase 2 (Drosophila)	3.32	1.26
DOCK6	Dedicator Of Cytokinesis 6	3.32	1.24
ACSL1	Fatty-Acid-Coenzyme A Ligase, Long-Chain 1	3.32	1.62
LOC55908	Hepatocellular Carcinoma-Associated Gene Td26	3.31	1.91
ENST00000308894	-	3.31	1.27
PRDX2	Peroxiredoxin 2	3.31	1.38
TFPI2	Tissue Factor Pathway Inhibitor 2	3.30	1.29
MESP1	Mesoderm Posterior 1 Homolog (Mouse)	3.30	1.27
IDH1	Isocitrate Dehydrogenase 1 (Nadp+), Soluble	3.30	1.26
LOC152831	-	3.29	1.48
TMEFF2	Transmembrane Protein With Egf-Like And Two Follistatin-Like Domains 2	3.27	1.20

ZAP128	Acyl-CoA thioesterase 2	3.26	1.31
ACAD9	Acyl-Coenzyme A Dehydrogenase Family, Member 9	3.24	1.25
KIAA1217	Kiaa1217	3.23	1.23
THC2373712	-	3.20	1.43
SAA4	Serum Amyloid A4, Constitutive	3.20	1.52
ALDH6A1	Aldehyde Dehydrogenase 6 Family, Member A1	3.20	1.24
ENST00000333415	-	3.20	1.23
BENE	Mal, T-cell differentiation protein-like	3.19	1.26
SMARCA2	Swi/Snf Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily A, Member 2	3.18	1.12
GPT2	Glutamic Pyruvate Transaminase (Alanine Aminotransferase) 2	3.16	1.34
CKB	Creatine Kinase, Brain	3.15	1.33
ADAMTSL3	Adamts-Like 3	3.15	1.13
A_24_P50666	-	3.15	1.40
MOSC1	Moco Sulphurase C-Terminal Domain Containing 1	3.14	1.23
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)	3.12	1.40
AK021744	-	3.12	1.22
MYLIP	Myosin Regulatory Light Chain Interacting Protein	3.12	1.28
SAA4	Serum Amyloid A4, Constitutive	3.11	1.51
RALA	V-Ral Simian Leukemia Viral Oncogene Homolog A (Ras Related)	3.10	1.16
ENST00000326261	-	3.10	1.14
A_24_P349547	-	3.09	1.23
DCI	Dodecenoyl-Coenzyme A Delta Isomerase (3,2 Trans-Enoyl-Coenzyme A Isomerase)	3.08	1.19
YWHAZ	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein, Zeta Polypeptide	3.04	1.14
HSPA2	Heat Shock 70kda Protein 2	3.04	1.20
C9orf58	Chromosome 9 Open Reading Frame 58	3.03	1.18
BC013295	-	3.02	1.15
TSPAN3	Tetraspanin 3	3.02	1.31
GYS1	Glycogen Synthase 1 (Muscle)	3.01	1.31
LOC152831	-	3.01	1.36
UQCRH	Ubiquinol-Cytochrome C Reductase Hinge Protein	3.00	1.21
AK2	Adenylate Kinase 2	3.00	1.16
ABCG1	Atp-Binding Cassette, Sub-Family G (White), Member 1	2.99	1.32
C8orf34	Chromosome 8 Open Reading Frame 34	2.99	1.37
TSFM	Ts Translation Elongation Factor, Mitochondrial	2.99	1.14
EPHX2	Epoxide Hydrolase 2, Cytoplasmic	2.98	1.23
C20orf3	Chromosome 20 Open Reading Frame 3	2.98	1.20
SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	2.97	2.11
MCF2L	Mcf.2 Cell Line Derived Transforming Sequence-Like	2.97	1.19
ADCY6	Adenylate Cyclase 6	2.96	1.12
FLJ25530	Hepatocyte Cell Adhesion Molecule	2.96	1.17
AL355688	-	2.96	1.25

SBLF	Stonin 1	2.96	1.14
GPC6	Glypican 6	2.94	1.26
PRDX2	Peroxiredoxin 2	2.94	1.23
AK094885	-	2.91	1.13
A_24_P272713	-	2.90	1.32
CLEC14A	C-Type Lectin Domain Family 14, Member A	2.90	1.21
FASN	Fatty Acid Synthase	2.89	1.43
FBXO9	F-Box Protein 9	2.89	1.15
IFI27	Interferon, Alpha-Inducible Protein 27	2.89	1.18
AK123264	-	2.89	1.20
FLJ10159	Hypothetical Protein Flj10159	2.89	1.15
THC2400529	-	2.89	1.24
IFI27	Interferon, Alpha-Inducible Protein 27	2.89	1.18
ATP5A1	Atp Synthase, H+ Transporting, Mitochondrial F1 Complex, Alpha Subunit 1, Cardiac Muscle	2.87	1.16
DGAT1	Diacylglycerol O-Acyltransferase Homolog 1 (Mouse)	2.87	1.19
ETFDH	Electron-Transferring-Flavoprotein Dehydrogenase	2.87	1.17
MGC4399	Pnc1 Protein	2.86	1.29
BCKDHA	Branched Chain Keto Acid Dehydrogenase E1, Alpha Polypeptide	2.86	1.14
LOC400969	-	2.86	1.17
PML	Promyelocytic Leukemia	2.85	1.15
MESP1	Mesoderm Posterior 1 Homolog (Mouse)	2.85	1.13
ANKS1	Ankyrin repeat and sterile alpha motif domain containing 1A	2.85	1.19
ANKRD38	Ankyrin Repeat Domain 38	2.84	1.39
GIMAP7	Gtpase, Imap Family Member 7	2.84	1.29
ADHFE1	Alcohol Dehydrogenase, Iron Containing, 1	2.84	1.23
PODXL	Podocalyxin-Like	2.84	1.34
IFI27	Interferon, Alpha-Inducible Protein 27	2.83	1.18
TSPAN18	Tetraspanin 18	2.83	1.20
RALA	V-Ral Simian Leukemia Viral Oncogene Homolog A (Ras Related)	2.82	1.19
ENST00000305820	-	2.82	1.26
HK2	Hexokinase 2	2.82	1.18
FLJ12057	-	2.82	1.18
BC036599	-	2.80	1.13
ENST00000329854	-	2.79	1.13
CLMN	Calmin (Calponin-Like, Transmembrane)	2.79	1.26
ACAS2	Acyl-CoA synthetase short-chain family member 2	2.79	1.21
FAM43B	Family With Sequence Similarity 43, Member B	2.79	1.16
MGC40157	-	2.78	1.22
STOX1	Storkhead Box 1	2.78	1.23
HIG2	Hypoxia-Inducible Protein 2	2.78	1.27
THC2316492	-	2.77	1.21
RGC32	Response Gene To Complement 32	2.77	1.14

AK3L1	Adenylate Kinase 3-Like 1	2.77	1.25
GYPC	Glycophorin C (Gerbich Blood Group)	2.76	1.15
AMOT	Angiomotin	2.76	1.26
AZGP1	Alpha-2-Glycoprotein 1, Zinc	2.76	1.39
FBLN5	Fibulin 5	2.76	1.17
LRRN6A	Leucine Rich Repeat Neuronal 6a	2.75	1.13
THC2315024	-	2.75	1.40
YBX2	Y Box Binding Protein 2	2.75	1.15
A_32_P8653	-	2.75	1.21
SERPINF1	Serpin Peptidase Inhibitor, Clade F (Alpha-2 Antiplasmin, Pigment Epithelium Derived Factor), Member 1	2.74	1.24
SLC25A1	Solute Carrier Family 25 (Mitochondrial Carrier; Citrate Transporter), Member 1	2.74	1.24
SCN4B	Sodium Channel, Voltage-Gated, Type Iv, Beta	2.74	1.26
AK2	Adenylate Kinase 2	2.74	1.19
FAM13A1	Family With Sequence Similarity 13, Member A1	2.73	1.24
AK021980	-	2.71	1.21
GRRP1	Glycine/Arginine Rich Protein 1	2.71	1.22
IGSF4	Immunoglobulin Superfamily, Member 4	2.71	1.28
DECR1	2,4-Dienoyl Coa Reductase 1, Mitochondrial	2.71	1.18
COX4I2	Cytochrome C Oxidase Subunit Iv Isoform 2 (Lung)	2.71	1.20
HP	Haptoglobin	2.70	2.70
ORMDL3	Hypothetical Protein Loc51242	2.70	1.16
PTPLB	Protein Tyrosine Phosphatase-Like (Proline Instead Of Catalytic Arginine), Member B	2.70	1.49
PLAT	Plasminogen Activator, Tissue	2.70	1.36
SGCG	Sarcoglycan, Gamma (35kda Dystrophin-Associated Glycoprotein)	2.69	1.20
NPDC1	Dkfzp586j0523 Protein	2.68	1.18
ASCIZ	Atm/Atr-Substrate Chk2-Interacting Zn2+-Finger Protein	2.68	1.08
AZGP1	Alpha-2-Glycoprotein 1, Zinc	2.68	1.37
FXYD6	Fxyd Domain Containing Ion Transport Regulator 6	2.68	1.14
GCSH	Glycine Cleavage System Protein H (Aminomethyl Carrier)	2.67	1.24
MGC45871	-	2.67	1.25
ALDH9A1	Aldehyde Dehydrogenase 9 Family, Member A1	2.67	1.25
DTX1	Deltex Homolog 1 (Drosophila)	2.66	1.20
APBB1IP	Amyloid Beta (A4) Precursor Protein-Binding, Family B, Member 1 Interacting Protein	2.65	1.14
TCF4	Transcription Factor 4	2.65	1.12
PDGFD	Platelet Derived Growth Factor D	2.65	1.22
THC2304000	-	2.65	1.28
PECR	Peroxisomal Trans-2-Enoyl-Coa Reductase	2.64	1.19
FADS1	Fatty Acid Desaturase 1	2.64	1.59
IFI27	Interferon, Alpha-Inducible Protein 27	2.64	1.16
MYOM1	Myomesin 1 (Skelemin) 185kda	2.63	1.49
PFKFB1	6-Phosphofructo-2-Kinase/Fructose-2,6-Biphosphatase 1	2.62	1.19

CLIC5	Chloride Intracellular Channel 5	2.62	1.21
WBSCR14	MLX Interacting Protein-Like (MLXIPL)	2.62	1.35
DDT	D-Dopachrome Tautomerase	2.62	1.19
A_32_P327750	-	2.62	1.27
ACVR1C	Activin A Receptor, Type Ic	2.61	1.20
SVIL	Supervillin	2.61	1.11
SLC9A3R2	Solute Carrier Family 9 (Sodium/Hydrogen Exchanger), Member 3 Regulator 2	2.60	1.23
PGM1	Phosphoglucomutase 1	2.60	1.31
SDPR	Serum Deprivation Response (Phosphatidylserine Binding Protein)	2.60	1.19
AK055981	-	2.60	1.16
AK097322	-	2.59	1.19
TMEPAI	Transmembrane, Prostate Androgen Induced Rna	2.58	1.35
FLJ10980	-	2.58	1.21
MDFI	Myod Family Inhibitor	2.58	1.24
IFI27	Interferon, Alpha-Inducible Protein 27	2.58	1.19
BRP44	Brain Protein 44	2.57	1.16
FLJ10980	-	2.57	1.24
EPB41L1	Erythrocyte Membrane Protein Band 4.1-Like 1	2.55	1.20
NFIX	Nuclear Factor I/X (Ccaat-Binding Transcription Factor)	2.55	1.17
GJA12	Gap Junction Protein, Alpha 12, 47kda	2.55	1.12
ACOX1	Acyl-Coenzyme A Oxidase 1, Palmitoyl	2.54	1.26
YWHAZ	Tyrosine 3-Monooxygenase/Tryptophan 5-Monooxygenase Activation Protein, Zeta Polypeptide	2.54	1.15
IFI27	Interferon, Alpha-Inducible Protein 27	2.54	1.17
ENST00000276898	-	2.53	1.11
ALDH2	Aldehyde Dehydrogenase 2 Family (Mitochondrial)	2.52	1.14
C22orf16	Chromosome 22 Open Reading Frame 16	2.52	1.28
MSH3	Muts Homolog 3 (E. Coli)	2.52	1.09
IFI27	Interferon, Alpha-Inducible Protein 27	2.52	1.16
EMP1	Epithelial Membrane Protein 1	2.51	1.18
A_24_P594293	-	2.51	1.14
HSPC268	Hypothetical Protein Hspc268	2.51	1.13
ME1	Malic Enzyme 1, Nadp(+)-Dependent, Cytosolic	2.51	1.25
IFI27	Interferon, Alpha-Inducible Protein 27	2.50	1.18
IFI27	Interferon, Alpha-Inducible Protein 27	2.50	1.15
CYCS	Cytochrome C, Somatic	2.50	1.13
SFRP2	Secreted Frizzled-Related Protein 2	2.49	1.24
PIK3C2B	Phosphoinositide-3-Kinase, Class 2, Beta Polypeptide	2.49	1.11
JM11	Jm11 Protein	2.49	1.11
IRX5	Iroquois Homeobox Protein 5	2.49	1.13
ATP10A	Atpase, Class V, Type 10c	2.48	1.16
LOC387911	Similar To Hypothetical Protein Mgc48915	2.48	1.24
TKT	Transketolase (Wernicke-Korsakoff Syndrome)	2.47	1.16

C19orf32	-	2.47	1.32
ADSSL1	Adenylosuccinate Synthase Like 1	2.46	1.36
PPAP2B	Phosphatidic Acid Phosphatase Type 2b	2.45	1.15
LPIN1	Lipin 1	2.43	1.16
NMB	Neuromedin B	2.43	1.35
FLJ25530	Hepatocyte Cell Adhesion Molecule	2.42	1.28
RAI2	Retinoic Acid Induced 2	2.41	1.12
Dietary Intervention (DI)	***Down Regulated Genes***		
IGSF21	Immunoglobin Superfamily, Member 21	-5.13	0.71
ENST00000307662	-	-4.87	0.79
S100A4	S100 Calcium Binding Protein A4 (Calcium Protein, Calvasculin, Metastasin, Murine Placental Homolog)	-4.77	0.73
TPM4	Tropomyosin 4	-4.69	0.77
LOXL2	Lysyl Oxidase-Like 2	-4.36	0.83
PPT1	Palmitoyl-Protein Thioesterase 1 (Ceroid-Lipofuscinosis, Neuronal 1, Infantile)	-4.32	0.80
TFRC	Transferrin Receptor (P90, Cd71)	-4.26	0.69
FLJ20533	-	-4.20	0.85
C1orf38	Chromosome 1 Open Reading Frame 38	-4.20	0.70
SCARB2	Scavenger Receptor Class B, Member 2	-4.19	0.77
LOXL2	Lysyl Oxidase-Like 2	-4.12	0.81
NFKBIE	Nuclear Factor Of Kappa Light Polypeptide Gene Enhancer In B-Cells Inhibitor, Epsilon	-4.11	0.81
LOXL2	Lysyl Oxidase-Like 2	-4.03	0.82
FTHL17	Ferritin, Heavy Polypeptide-Like 17	-4.01	0.82
ASAH1	N-Acylsphingosine Amidohydrolase (Acid Ceramidase) 1	-4.00	0.71
CRIP1	Cysteine-Rich Protein 1 (Intestinal)	-3.96	0.83
A_24_P753760	-	-3.91	0.80
LOXL2	Lysyl Oxidase-Like 2	-3.89	0.83
LOXL2	Lysyl Oxidase-Like 2	-3.87	0.84
PEMT	Phosphatidylethanolamine N-Methyltransferase	-3.87	0.75
MFSD1	Major Facilitator Superfamily Domain Containing 1	-3.83	0.80
ENST00000313481	-	-3.81	0.79
AMPD3	Adenosine Monophosphate Deaminase (Isoform E)	-3.79	0.78
AK128714	-	-3.78	0.81
A_24_P281683	-	-3.71	0.79
GPR34	G Protein-Coupled Receptor 34	-3.71	0.81
LCP1	Lymphocyte Cytosolic Protein 1 (L-Plastin)	-3.70	0.65
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.68	0.44
TIMP1	Timp Metallopeptidase Inhibitor 1	-3.65	0.76
HCST	Hematopoietic Cell Signal Transducer	-3.65	0.71
MRC1L1	Mannose Receptor, C Type 1-Like 1	-3.65	0.75
BLOC1S2	Biogenesis Of Lysosome-Related Organelles Complex-1,	-3.64	0.84

	Subunit 2		
TUBA6	Tubulin, Alpha, Ubiquitous	-3.64	0.78
CYBA	Cytochrome B-245, Alpha Polypeptide	-3.63	0.80
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.60	0.44
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.60	0.44
SFRP4	Secreted Frizzled-Related Protein 4	-3.59	0.71
PSAP	Prosaposin (Variant Gaucher Disease And Variant Metachromatic Leukodystrophy)	-3.56	0.81
MARCO	Macrophage Receptor With Collagenous Structure	-3.56	0.63
LOXL2	Lysyl Oxidase-Like 2	-3.55	0.81
C12orf5	Chromosome 12 Open Reading Frame 5	-3.54	0.82
VSIG4	V-Set And Immunoglobulin Domain Containing 4	-3.53	0.66
ENST00000324925	-	-3.53	0.83
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.53	0.46
CHI3L1	Chitinase 3-Like 1 (Cartilage Glycoprotein-39)	-3.51	0.65
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.51	0.47
CTSZ	Cathepsin Z	-3.50	0.79
VAMP8	Vesicle-Associated Membrane Protein 8 (Endobrevin)	-3.49	0.73
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.47	0.47
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.47	0.48
LOXL2	Lysyl Oxidase-Like 2	-3.47	0.85
LOXL2	Lysyl Oxidase-Like 2	-3.47	0.85
C1orf162	Chromosome 1 Open Reading Frame 162	-3.46	0.73
BQ049338	-	-3.44	0.72
-	Cd163 Antigen	-3.44	0.65
NQO1	Nad(P)H Dehydrogenase, Quinone 1	-3.44	0.78
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	-3.43	0.40
RGS10	Regulator Of G-Protein Signalling 10	-3.42	0.76
PGM2	Phosphoglucomutase 2	-3.42	0.89
CCR1	Chemokine (C-C Motif) Receptor 1	-3.39	0.68
KIAA1598	Kiaa1598	-3.37	0.82
C1QB	Complement Component 1, Q Subcomponent, B Chain	-3.36	0.69
SLCO2B1	Solute Carrier Organic Anion Transporter Family, Member 2b1	-3.30	0.72
LOXL2	Lysyl Oxidase-Like 2	-3.29	0.84
HSPA8	Heat Shock 70kda Protein 8	-3.29	0.85
SLAMF8	Slam Family Member 8	-3.28	0.69
TUBA1	Tubulin, Alpha 1 (Testis Specific)	-3.28	0.82
CD248	Cd248 Antigen, Endosialin	-3.28	0.77
ITGB5	Integrin, Beta 5	-3.27	0.83
PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor	-3.27	0.54

	Acetylhydrolase, Plasma)		
SLC7A7	Solute Carrier Family 7 (Cationic Amino Acid Transporter, Y+ System), Member 7	-3.26	0.81
GLB1	Galactosidase, Beta 1	-3.22	0.79
NPL	N-Acetylneuraminate Pyruvate Lyase (Dihydrodipicolinate Synthase)	-3.22	0.67
FCGBP	Fc Fragment Of Igg Binding Protein	-3.21	0.62
CD52	Cd52 Antigen (Campath-1 Antigen)	-3.21	0.58
LGMN	Legumain	-3.20	0.81
FTH1	Ferritin, Heavy Polypeptide 1	-3.18	0.82
IFI30	Interferon, Gamma-Inducible Protein 30	-3.17	0.58
GLIPR1	Gli Pathogenesis-Related 1 (Glioma)	-3.16	0.83
PLEK	Pleckstrin	-3.16	0.79
MFAP5	Microfibrillar Associated Protein 5	-3.16	0.78
MS4A6A	Cd20-Like Precusor	-3.15	0.74
MS4A4A	Membrane-Spanning 4-Domains, Subfamily A, Member 4	-3.15	0.70
PPGB	Protective Protein For Beta-Galactosidase (Galactosialidosis)	-3.15	0.83
GSTO1	Glutathione S-Transferase Omega 1	-3.14	0.80
S100A11	S100 Calcium Binding Protein A11 (Calgizzarin)	-3.14	0.81
EMP3	Epithelial Membrane Protein 3	-3.14	0.80
BCAT1	Branched Chain Aminotransferase 1, Cytosolic	-3.13	0.74
MSR1	Macrophage Scavenger Receptor 1	-3.12	0.72
LAPTM5	Lysosomal Associated Multispanning Membrane Protein 5	-3.12	0.71
CSTB	Cystatin B (Stefin B)	-3.12	0.79
LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)	-3.11	0.64
CTSB	Cathepsin B	-3.10	0.77
GLIPR1	Gli Pathogenesis-Related 1 (Glioma)	-3.09	0.74
AADACL1	Arylacetamide Deacetylase-Like 1	-3.09	0.61
A_24_P110601	-	-3.09	0.82
RPN2	Ribophorin Ii	-3.09	0.83
A_24_P92823	-	-3.09	0.88
SNX10	Sorting Nexin 10	-3.08	0.80
F13A1	Coagulation Factor Xiii, A1 Polypeptide	-3.07	0.72
TTYH3	Tweety Homolog 3 (Drosophila)	-3.07	0.75
ECGF1	Endothelial Cell Growth Factor 1 (Platelet-Derived)	-3.06	0.74
CTSB	Cathepsin B	-3.05	0.69
LOC401115	Hypothetical Gene Supported By Bc038466; Bc062790	-3.05	0.83
A_24_P349869	-	-3.05	0.80
TUBA6	Tubulin, Alpha, Ubiquitous	-3.04	0.81
MT1H	Metallothionein 1h	-3.04	0.84
C20orf24	Chromosome 20 Open Reading Frame 24	-3.04	0.83
GPR109B	G Protein-Coupled Receptor 109b	-3.04	0.90
BYSL	Bystin-Like	-3.04	0.86
ENST00000333604	-	-3.03	0.87

DKFZP586H2123	Regeneration Associated Muscle Protease	-3.03	0.87
C1QG	Complement component 1, q subcomponent, C chain	-3.03	0.76
TMEM33	Transmembrane Protein 33	-3.02	0.83
EMILIN2	Elastin Microfibril Interfacer 2	-3.02	0.71
COMT	Catechol-O-Methyltransferase	-3.02	0.85
LOC389033	Hypothetical Loc389033	-3.01	0.83
MT1G	Metallothionein 1g	-2.99	0.78
STAB1	Stabilin 1	-2.99	0.80
TUBA6	Tubulin, Alpha, Ubiquitous	-2.99	0.79
MT1E	Metallothionein 1e (Functional)	-2.99	0.83
CSF1R	Colony Stimulating Factor 1 Receptor, Formerly Mcdonough Feline Sarcoma Viral (V-Fms) Oncogene Homolog	-2.99	0.74
TNFRSF12A	Tumor Necrosis Factor Receptor Superfamily, Member 12a	-2.99	0.72
MS4A7	Membrane-Spanning 4-Domains, Subfamily A, Member 7	-2.98	0.72
CES1	Carboxylesterase 1 (Monocyte/Macrophage Serine Esterase 1)	-2.98	0.75
LHFPL2	Lipoma Hmgic Fusion Partner-Like 2	-2.97	0.80
FCGR2B	Fc Fragment Of Igg, Low Affinity Iib, Receptor (Cd32)	-2.97	0.74
PEPD	Peptidase D	-2.97	0.87
ITGAM	Integrin, Alpha M (Complement Component 3 Receptor 3 Subunit)	-2.96	0.77
ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)	-2.96	0.67
CLU	Clusterin	-2.95	0.78
FOLR2	Folate Receptor 2 (Fetal)	-2.95	0.76
MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)	-2.94	0.48
TPM4	Tropomyosin 4	-2.93	0.82
MAFB	V-Maf Musculoaponeurotic Fibrosarcoma Oncogene Homolog B (Avian)	-2.93	0.80
FADS3	Fatty Acid Desaturase 3	-2.93	0.86
MT1L	Metallothionein 1l	-2.92	0.82
-	Cd14 Antigen	-2.92	0.73
CTSB	Cathepsin B	-2.91	0.72
SLC7A4	Solute Carrier Family 7 (Cationic Amino Acid Transporter, Y+ System), Member 4	-2.91	0.83
PPGB	Protective Protein For Beta-Galactosidase (Galactosialidosis)	-2.90	0.88
FLJ20647	Hypothetical Protein Flj20647	-2.90	0.83
H2-ALPHA	Alpha-Tubulin Isotype H2-Alpha	-2.89	0.82
MECR	Mitochondrial Trans-2-Enoyl-Coa Reductase	-2.87	0.85
UBQLN1	Ubiquilin 1	-2.87	0.88
HAVCR2	Hepatitis A Virus Cellular Receptor 2	-2.87	0.72
RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1	-2.87	0.82
IRF5	Interferon Regulatory Factor 5	-2.87	0.78
RAC2	Ras-Related C3 Botulinum Toxin Substrate 2 (Rho Family, Small Gtp Binding Protein Rac2)	-2.86	0.77
ATF3	Activating Transcription Factor 3	-2.85	0.70

MT1H	Metallothionein 1h	-2.85	0.84
TM7SF1	G protein-coupled receptor 137B	-2.85	0.83
MICAL2	Microtubule Associated Monoxygenase, Calponin And Lim Domain Containing 2	-2.85	0.90
URP2	Unc-112 Related Protein 2	-2.85	0.74
TGFBI	Transforming Growth Factor, Beta-Induced, 68kda	-2.84	0.79
PRO1855	-	-2.84	0.86
MMP19	Matrix Metalloproteinase 18	-2.83	0.78
C2	Complement Component 2	-2.83	0.83
C1orf38	Chromosome 1 Open Reading Frame 38	-2.82	0.79
SLC16A3	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 3	-2.82	0.71
ENO1	Enolase 1, (Alpha)	-2.81	0.85
MXRA5	Matrix-Remodelling Associated 5	-2.81	0.75
LILRB5	Leukocyte Immunoglobulin-Like Receptor, Subfamily B (With Tm And Itim Domains), Member 5	-2.81	0.71
KYNU	Kynureninase (L-Kynurenine Hydrolase)	-2.81	0.72
CREG1	Cellular Repressor Of E1a-Stimulated Genes 1	-2.81	0.86
CSPG2	Chondroitin Sulfate Proteoglycan 2 (Versican)	-2.80	0.82
GATM	Glycine Amidinotransferase (L-Arginine:Glycine Amidinotransferase)	-2.79	0.83
C20orf24	Chromosome 20 Open Reading Frame 24	-2.78	0.82
A_24_P835388	-	-2.77	0.80
AK126405	-	-2.77	0.76
-	Cd68 Antigen	-2.77	0.72
AGPAT3	1-Acylglycerol-3-Phosphate O-Acyltransferase 3	-2.77	0.81
DUSP6	Dual Specificity Phosphatase 6	-2.77	0.84
GGH	Gamma-Glutamyl Hydrolase (Conjugase, Folylpolygammaglutamyl Hydrolase)	-2.77	0.87
GLB1	Galactosidase, Beta 1	-2.76	0.83
LOXL2	Lysyl Oxidase-Like 2	-2.76	0.84
LY86	Lymphocyte Antigen 86	-2.76	0.82
NRAS	V-Ha-Ras Harvey Rat Sarcoma Viral Oncogene Homolog	-2.75	0.88
C22orf9	Chromosome 22 Open Reading Frame 9	-2.75	0.83
CSTA	Cystatin A (Stefin A)	-2.74	0.84
A_23_P21882	-	-2.74	0.84
IL10RA	Interleukin 10 Receptor, Alpha	-2.74	0.76
CKS2	Cdc28 Protein Kinase Regulatory Subunit 2	-2.74	0.80
VKORC1L1	Vitamin K Epoxide Reductase Complex, Subunit 1-Like 1	-2.74	0.85
-	Extracellular Link Domain Containing 1	-2.74	0.78
SRD5A2L	Steroid 5 Alpha-Reductase 2-Like	-2.72	0.88
UCHL1	Ubiquitin Carboxyl-Terminal Esterase L1 (Ubiquitin Thiolesterase)	-2.72	0.71
LAPTM5	Lysosomal Associated Multispanning Membrane Protein 5	-2.72	0.75
DNCL1	Dynein, light chain, LC8-type 1	-2.72	0.88
TUBA3	Tubulin, Alpha 3	-2.72	0.81

ADAM12	Adam Metallopeptidase Domain 12 (Meltrin Alpha)	-2.71	0.85
WDFY4	Wdfy Family Member 4	-2.70	0.76
RAB31	Rab31, Member Ras Oncogene Family	-2.70	0.87
MKKS	Mckusick-Kaufman Syndrome	-2.70	0.92
SAT	Spermidine/Spermine N1-Acetyltransferase	-2.70	0.84
SYK	Spleen Tyrosine Kinase	-2.70	0.84
FN1	Fibronectin 1	-2.70	0.82
CTSC	Cathepsin C	-2.69	0.87
MT1B	Metallothionein 1b (Functional)	-2.69	0.81
LDHA	Lactate Dehydrogenase A	-2.69	0.88
TMCO3	Transmembrane And Coiled-Coil Domains 3	-2.69	0.90
MT1X	Metallothionein 1x	-2.68	0.84
DC13	chromosome 16 open reading frame 61	-2.68	0.90
GSTO1	Glutathione S-Transferase Omega 1	-2.68	0.82
BLOC1S2	Biogenesis Of Lysosome-Related Organelles Complex-1, Subunit 2	-2.68	0.84
SOD2	Superoxide Dismutase 2, Mitochondrial	-2.68	0.85
C20orf55	Chromosome 20 Open Reading Frame 55	-2.68	0.90
ARPC1B	Actin Related Protein 2/3 Complex, Subunit 1b, 41kda	-2.67	0.78
TXN	Thioredoxin	-2.66	0.86
C1orf162	Chromosome 1 Open Reading Frame 162	-2.66	0.79
RPS27L	Ribosomal Protein S27-Like	-2.66	0.90
CPVL	Carboxypeptidase, Vitellogenic-Like	-2.66	0.84
CR593158	-	-2.66	0.80
MS4A6A	Cd20-Like Precusor	-2.66	0.81
ECT2	Epithelial Cell Transforming Sequence 2 Oncogene	-2.65	0.89
SDSL	Serine Dehydratase-Like	-2.65	0.84
ATP6V1B2	Atpase, H+ Transporting, Lysosomal 56/58kda, V1 Subunit B2	-2.65	0.83
HLA-DMA	Major Histocompatibility Complex, Class Ii, Dm Alpha	-2.64	0.86
MMP19	Matrix Metalloproteinase 18	-2.63	0.77
BIT1	Peptidyl-tRNA hydrolase 2 (PTRH2)	-2.63	0.88
RAB31	Rab31, Member Ras Oncogene Family	-2.63	0.86
VAMP4	Vesicle-Associated Membrane Protein 4	-2.62	0.90
FBP1	Fructose-1,6-Bisphosphatase 1	-2.62	0.76
LOC552891	Guanine Nucleotide Binding Protein (G Protein), Gamma 10	-2.62	0.87
GNB1	Guanine Nucleotide Binding Protein (G Protein), Beta Polypeptide 1	-2.62	0.87
MT1A	Metallothionein 1a (Functional)	-2.62	0.86
A_24_P264685	-	-2.61	0.86
A_24_P383901	-	-2.61	0.85
CCL2	Chemokine (C-C Motif) Ligand 2	-2.61	0.74
ARRDC4	Arrestin Domain Containing 4	-2.61	0.89
CCL13	Chemokine (C-C Motif) Ligand 13	-2.61	0.72
MT2A	Metallothionein 2a	-2.61	0.81

FLJ20273	Rna-Binding Protein	-2.61	0.82
TK1	Thymidine Kinase 1, Soluble	-2.60	0.71
CSTA	Cystatin A (Stefin A)	-2.59	0.87
SLC31A2	Solute Carrier Family 31 (Copper Transporters), Member 2	-2.59	0.82
SLC38A6	Solute Carrier Family 38, Member 6	-2.59	0.81
MAPRE1	Microtubule-Associated Protein, Rp/Eb Family, Member 1	-2.59	0.91
THC2365247	-	-2.57	0.84
C7orf20	Chromosome 7 Open Reading Frame 20	-2.56	0.90
IL1R1	Interleukin 1 Receptor, Type I	-2.56	0.88
MRPL17	Mitochondrial Ribosomal Protein L17	-2.55	0.88
ENST00000308384	-	-2.55	0.86
FCER1G	Fc Fragment Of Ige, High Affinity I, Receptor For; Gamma Polypeptide	-2.54	0.83
ADCY7	Adenylate Cyclase 7	-2.54	0.89
IL10RA	Interleukin 10 Receptor, Alpha	-2.54	0.83
LOC202459	Similar To Riken Cdna 2310008m10	-2.53	0.88
COL5A2	Collagen, Type V, Alpha 2	-2.53	0.84
DSCR1	Down Syndrome Critical Region Gene 1	-2.53	0.88
KPNA2	Karyopherin Alpha 2 (Rag Cohort 1, Importin Alpha 1)	-2.53	0.82
MYO5A	Myosin Va (Heavy Polypeptide 12, Myoxin)	-2.53	0.89
ARRB2	Arrestin, Beta 2	-2.53	0.82
ACTC	Actin, Alpha, Cardiac Muscle	-2.52	0.84
FDX1	Ferredoxin 1	-2.52	0.85
CTSC	Cathepsin C	-2.52	0.86
PTAFR	Platelet-Activating Factor Receptor	-2.51	0.85
CXCL9	Chemokine (C-X-C Motif) Ligand 9	-2.51	0.79
ST14	Suppression Of Tumorigenicity 14 (Colon Carcinoma)	-2.51	0.76
LOC96610	Hypothetical Protein Similar To Kiaa0187 Gene Product	-2.51	0.89
RNASE1	Ribonuclease, Rnase A Family, 1 (Pancreatic)	-2.51	0.85
RRAS2	Related Ras Viral (R-Ras) Oncogene Homolog 2	-2.50	0.84
A_24_P58647	-	-2.50	0.88
LDLR	Low Density Lipoprotein Receptor (Familial Hypercholesterolemia)	-2.50	0.83
CTSS	Cathepsin S	-2.49	0.76
C6orf51	Chromosome 6 Open Reading Frame 51	-2.49	0.87
PGK1	Phosphoglycerate Kinase 1	-2.49	0.86
CD33	Cd33 Antigen (Gp67)	-2.49	0.87
SH3BGRL3	Sh3 Domain Binding Glutamic Acid-Rich Protein Like 3	-2.48	0.84
CKIP-1	Leckstrin homology domain containing, family O member 1	-2.48	0.82
RACGAP1	Rac Gtpase Activating Protein 1	-2.48	0.88
C9orf19	17kd Fetal Brain Protein	-2.48	0.79
HSPC196	Hypothetical Protein Hspc196	-2.47	0.89
HIST2H2AA	Histone 2, H2aa	-2.47	0.88
AIF1	Allograft Inflammatory Factor 1	-2.46	0.77
DRB1	Developmentally Regulated Rna-Binding Protein 1	-2.46	0.93

STK38L	Serine/Threonine Kinase 38 Like	-2.45	0.90
GPC1	Glypican 1	-2.45	0.79
PGK1	Phosphoglycerate Kinase 1	-2.45	0.87
HLA-DPB1	Major Histocompatibility Complex, Class Ii, Dp Beta 1	-2.45	0.85
SCARA3	Scavenger Receptor Class A, Member 3	-2.45	0.83
THC2279832	-	-2.45	0.80
A_24_P212314	-	-2.45	0.82
GMFB	Glia Maturation Factor, Beta	-2.45	0.84
FLJ22875	-	-2.45	0.83
CD209	Cd209 Antigen	-2.44	0.83
THC2364841	-	-2.44	0.84
BX647543	-	-2.44	0.80
ENST00000245185	-	-2.44	0.83
CD9	Cd9 Antigen (P24)	-2.44	0.80
C6orf115	Chromosome 6 Open Reading Frame 115	-2.44	0.81
CD53	Cd53 Antigen	-2.42	0.78
CCR5	Chemokine (C-C Motif) Receptor 5	-2.41	0.79
CKLFSF6	-	-2.41	0.88
ENST00000309178	-	-2.41	0.90
TPM3	Tropomyosin 3	-2.40	0.88
LOC96610	Hypothetical Protein Similar To Kiaa0187 Gene Product	-2.40	0.91
A_24_P264416	-	-2.40	0.83
LOC96610	Hypothetical Protein Similar To Kiaa0187 Gene Product	-2.40	0.89
S100A11	S100 Calcium Binding Protein A11 (Calgizzarin)	-2.40	0.83
TUBB3	Melanocortin 1 Receptor (Alpha Melanocyte Stimulating Hormone Receptor)	-2.39	0.82
CIAS1	Chromosome 1 Open Reading Frame 7	-2.39	0.86
SGK	Serum/Glucocorticoid Regulated Kinase	-2.39	0.78
BDKRB2	Bradykinin Receptor B2	-2.39	0.82
HLA-DMB	Major Histocompatibility Complex, Class Ii, Dm Beta	-2.39	0.83
PSAP	Prosaposin (Variant Gaucher Disease And Variant Metachromatic Leukodystrophy)	-2.38	0.86
SULT1A2	Sulfotransferase Family, Cytosolic, 1a, Phenol-Preferring, Member 2	-2.38	0.86
FOLR2	Folate Receptor 2 (Fetal)	-2.38	0.80
TUBB2	Tubulin, beta 2A	-2.37	0.78
PSMD14	Proteasome (Prosome, Macropain) 26s Subunit, Non-Atpase, 14	-2.37	0.91
GAPDH	Glyceraldehyde-3-Phosphate Dehydrogenase	-2.37	0.84
ZCSL2	Zinc Finger, Csl-Type Containing 2	-2.37	0.88
MTCH2	Mitochondrial Carrier Homolog 2 (C. Elegans)	-2.37	0.90
ATOX1	Atx1 Antioxidant Protein 1 Homolog (Yeast)	-2.37	0.86
FUCA1	Fucosidase, Alpha-L- 1, Tissue	-2.37	0.82
PKP3	Plakophilin 3	-2.37	0.91
PGDS	Prostaglandin D2 Synthase, Hematopoietic	-2.37	0.79
DNCL1	Dynein, light chain, LC8-type 1	-2.36	0.87

PSCD4	Pleckstrin Homology, Sec7 And Coiled-Coil Domains 4	-2.36	0.82
FN1	Fibronectin 1	-2.36	0.85
COLEC11	Collectin Sub-Family Member 11	-2.36	0.86
ALG9	Asparagine-Linked Glycosylation 9 Homolog (Yeast, Alpha-1,2-Mannosyltransferase)	-2.36	0.89
H2AFY	H2a Histone Family, Member Y	-2.35	0.87
EDARADD	Edar-Associated Death Domain	-2.35	0.85
ATP6V0C	Atpase, H+ Transporting, Lysosomal 16kda, V0 Subunit C	-2.35	0.90
ATP1B1	Atpase, Na+/K+ Transporting, Beta 1 Polypeptide	-2.35	0.74
C13orf12	Chromosome 13 Open Reading Frame 12	-2.35	0.90
HLA-DMA	Major Histocompatibility Complex, Class Ii, Dm Alpha	-2.34	0.84
ATP6V0B	Atpase, H+ Transporting, Lysosomal 21kda, V0 Subunit B	-2.34	0.85
NOMO1	Nodal Modulator 1	-2.34	0.91
A_24_P255303	-	-2.33	0.88
DCTD	Dcmp Deaminase	-2.33	0.89
NPC2	Niemann-Pick Disease, Type C2	-2.33	0.82
GLRX	Glutaredoxin (Thioltransferase)	-2.33	0.87
A_24_P187626	-	-2.33	0.80
C19orf28	Hypothetical Protein Pp3501	-2.33	0.76
IER3	Immediate Early Response 3	-2.33	0.83
SLC39A14	Solute Carrier Family 39 (Zinc Transporter), Member 14	-2.32	0.85
APH1B	Anterior Pharynx Defective 1 Homolog B (C. Elegans)	-2.32	0.88
LOX	Lysyl Oxidase	-2.32	0.87
CCRL2	Chemokine (C-C Motif) Receptor-Like 2	-2.32	0.85
CD47	Cd47 Antigen (Rh-Related Antigen, Integrin-Associated Signal Transducer)	-2.31	0.86
PLTP	Phospholipid Transfer Protein	-2.31	0.81
RNF141	Ring Finger Protein 141	-2.31	0.87
ENST00000272762	-	-2.31	0.88
ACTR3	Arp3 Actin-Related Protein 3 Homolog (Yeast)	-2.30	0.85
LACE1	Lactation Elevated-1	-2.30	0.92
SNCG	Synuclein, Gamma (Breast Cancer-Specific Protein 1)	-2.30	0.86
RNASET2	Ribonuclease T2	-2.29	0.83
ACTB	Actin, Beta	-2.29	0.86
LGALS9	Lectin, Galactoside-Binding, Soluble, 9 (Galectin 9)	-2.29	0.81
MAN2B1	Mannosidase, Alpha, Class 2b, Member 1	-2.29	0.85
A_24_P49800	-	-2.29	0.83
TMED5	Transmembrane Emp24 Protein Transport Domain Containing 5	-2.29	0.89
AI379175	-	-2.29	0.85
IMPA3	cDNA FLJ33669 fis, clone BRAMY2028740	-2.29	0.87
LOC493856	Similar To Riken Cdna 1500009m05 Gene	-2.29	0.87
CYB561D2	Cytochrome B-561 Domain Containing 2	-2.28	0.89
DPP3	Dipeptidyl-Peptidase 3	-2.28	0.86
A_24_P161655	-	-2.28	0.89

ACTR3	Arp3 Actin-Related Protein 3 Homolog (Yeast)	-2.28	0.86
SPINT2	Serine Peptidase Inhibitor, Kunitz Type, 2	-2.28	0.83
A_23_P170719	-	-2.27	0.81
LOC442204	Similar To Myosin Regulatory Light Chain-Like	-2.27	0.89
STAT3	Signal Transducer And Activator Of Transcription 3 (Acute-Phase Response Factor)	-2.27	0.91
ATP6V1F	Atpase, H+ Transporting, Lysosomal 14kda, V1 Subunit F	-2.27	0.85
A_24_P247175	-	-2.27	0.86
C22orf9	Chromosome 22 Open Reading Frame 9	-2.26	0.83
C1QA	Complement Component 1, Q Subcomponent, A Chain	-2.25	0.77
MPEG1	Macrophage Expressed Gene 1	-2.25	0.81
SVH	Svh Protein	-2.25	0.92
EFHD2	Ef-Hand Domain Family, Member D2	-2.24	0.86
FLJ21103	Hypothetical Protein Flj21103	-2.24	0.91
GDF15	Growth Differentiation Factor 15	-2.24	0.67
A_23_P170713	-	-2.24	0.82
P4HB	Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide	-2.24	0.87
TRPV2	Vanilloid Receptor-Like Protein 1	-2.24	0.79
TCTEL1	Dynein, light chain, Tctex-type 1	-2.23	0.91
RAC2	Ras-Related C3 Botulinum Toxin Substrate 2 (Rho Family, Small Gtp Binding Protein Rac2)	-2.23	0.79
AF086044	-	-2.23	0.84
SRXN1	Sulfiredoxin 1 Homolog (S. Cerevisiae)	-2.23	0.91
ENST00000303830	-	-2.23	0.85
TUBB8	Tubulin, Beta 8	-2.23	0.82
SPCS3	Signal Peptidase Complex Subunit 3 Homolog (S. Cerevisiae)	-2.23	0.85
SMPD1	Sphingomyelin Phosphodiesterase 1, Acid Lysosomal (Acid Sphingomyelinase)	-2.23	0.90
FGR	Gardner-Rasheed Feline Sarcoma Viral (V-Fgr) Oncogene Homolog	-2.23	0.75
DNASE2	Deoxyribonuclease Ii, Lysosomal	-2.22	0.90
TAGLN2	Transgelin 2	-2.22	0.89
BE926212	-	-2.21	0.87
SLA	Src-Like-Adaptor	-2.21	0.80
DHCR24	24-Dehydrocholesterol Reductase	-2.21	0.82
ANGPTL4	Angiopoietin-Like 4	-2.21	0.82
IMPA3	cDNA FLJ33669 fis, clone BRAMY2028740	-2.21	0.88
RHEB	Ras Homolog Enriched In Brain	-2.21	0.90
TUBA6	Tubulin, Alpha, Ubiquitous	-2.21	0.82
SQSTM1	Sequestosome 1	-2.21	0.86
SLC15A3	Solute Carrier Family 15, Member 3	-2.21	0.82
CENTA2	Centaurin, Alpha 2	-2.20	0.80
PRDX1	Peroxiredoxin 1	-2.20	0.90
MAF	V-Maf Musculoaponeurotic Fibrosarcoma Oncogene Homolog (Avian)	-2.20	0.86

IQGAP2	Iq Motif Containing Gtpase Activating Protein 2	-2.20	0.85
TPARL	Tpa Regulated Locus	-2.20	0.90
PEA15	Phosphoprotein Enriched In Astrocytes 15	-2.19	0.88
GP9	Glycoprotein Ix (Platelet)	-2.19	0.90
A_24_P631993	-	-2.19	0.84
ADFP	Adipose Differentiation-Related Protein	-2.19	0.85
CD97	Cd97 Antigen	-2.18	0.89
HLA-DQB1	Major Histocompatibility Complex, Class Ii, Dq Beta 1	-2.18	0.85
CAP1	Cap, Adenylate Cyclase-Associated Protein 1 (Yeast)	-2.18	0.88
M160	CD163 antigen-like 1	-2.18	0.85
SRPRB	Signal Recognition Particle Receptor, B Subunit	-2.18	0.89
ADAM9	Adam Metallopeptidase Domain 9 (Meltrin Gamma)	-2.18	0.85
UCHL3	Ubiquitin Carboxyl-Terminal Esterase L3 (Ubiquitin Thiolesterase)	-2.18	0.91
TXN	Thioredoxin	-2.17	0.89
AKR1C1	Aldo-Keto Reductase Family 1, Member C1 (Dihydrodiol Dehydrogenase 1; 20-Alpha (3-Alpha)-Hydroxysteroid Dehydrogenase)	-2.17	0.87
ODC1	Ornithine Decarboxylase 1	-2.17	0.92
AES	Amino-Terminal Enhancer Of Split	-2.17	0.88
C1orf85	Chromosome 1 Open Reading Frame 85	-2.17	0.91
THC2371907	-	-2.17	0.89
SURB7	Srb7 Suppressor Of Rna Polymerase B Homolog (Yeast)	-2.17	0.91
WDR1	Wd Repeat Domain 1	-2.17	0.88
RDH5	Retinol Dehydrogenase 5 (11-Cis And 9-Cis)	-2.17	0.86
DC2	Dc2 Protein	-2.16	0.88
HLA-DPA1	Major Histocompatibility Complex, Class Ii, Dp Alpha 1	-2.16	0.86
HSD11B1	Hydroxysteroid (11-Beta) Dehydrogenase 1	-2.15	0.80
CAPG	Capping Protein (Actin Filament), Gelsolin-Like	-2.15	0.78
CA414006	-	-2.15	0.88
pp9099	-	-2.15	0.82
THC2280549	-	-2.14	0.90
A_24_P255786	-	-2.14	0.85
OGFRL1	Opioid Growth Factor Receptor-Like 1	-2.14	0.89
SEC61G	Sec61 Gamma Subunit	-2.14	0.91
LILRA6	Leukocyte Immunoglobulin-Like Receptor, Subfamily A (With Tm Domain), Member 6	-2.14	0.85
ARPC2	Actin Related Protein 2/3 Complex, Subunit 2, 34kda	-2.14	0.90
BAG3	Bcl2-Associated Athanogene 3	-2.13	0.90
HSPB8	Heat Shock 22kda Protein 8	-2.13	0.86
A_32_P113533	-	-2.13	0.85
FCGR2A	Fc Fragment Of Igg, Low Affinity Iia, Receptor (Cd32)	-2.13	0.84
PKM2	Pyruvate Kinase, Muscle	-2.13	0.81
LOC201895	Hypothetical Protein Loc201895	-2.13	0.88
AJ294733	-	-2.12	0.87

CCT5	Chaperonin Containing Tcp1, Subunit 5 (Epsilon)	-2.12	0.93
MOPT	MORN repeat containing 2	-2.12	0.92
AK024680	-	-2.12	0.83
IL10RB	Interleukin 10 Receptor, Beta	-2.12	0.92
LOC402418	-	-2.12	0.86
ENST00000355670	-	-2.12	0.85
ITGAV	Integrin, Alpha V (Vitronectin Receptor, Alpha Polypeptide, Antigen Cd51)	-2.12	0.87
MGAT4A	Mannosyl (Alpha-1,3-)-Glycoprotein Beta-1,4-N-Acetylglucosaminyltransferase, Isozyme A	-2.11	0.90
PPIL1	Peptidylprolyl Isomerase (Cyclophilin)-Like 1	-2.11	0.88
FKSG30	Actin-Like Protein	-2.11	0.85
AX721087	-	-2.10	0.83
MRPL14	Mitochondrial Ribosomal Protein L14	-2.10	0.92
ARL1	Adp-Ribosylation Factor-Like 1	-2.10	0.91
ATP1A3	Atpase, Na+/K+ Transporting, Alpha 3 Polypeptide	-2.10	0.89
ZCSL2	Zinc Finger, Csl-Type Containing 2	-2.10	0.90
PYCARD	Pyd And Card Domain Containing	-2.10	0.86
ALDH1A3	Aldehyde Dehydrogenase 1 Family, Member A3	-2.10	0.83
RNF14	Ring Finger Protein 14	-2.09	0.90
LOC440731	Hypothetical Loc440731	-2.09	0.91
CYBASC3	Cytochrome B, Ascorbate Dependent 3	-2.09	0.87
IL4I1	Interleukin 4 Induced 1	-2.09	0.74
ATP6AP1	Atpase, H+ Transporting, Lysosomal Accessory Protein 1	-2.09	0.85
SEP15	-	-2.09	0.87
C20orf35	Chromosome 20 Open Reading Frame 35	-2.09	0.90
GPBAR1	G Protein-Coupled Bile Acid Receptor 1	-2.08	0.88
AL122093	-	-2.08	0.85
EIF3S1	Eukaryotic Translation Initiation Factor 3, Subunit 1 Alpha, 35kda	-2.08	0.92
GK001	Coiled-coil domain containing 47	-2.08	0.89
MGAT1	Mannosyl (Alpha-1,3-)-Glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase	-2.08	0.88
CYP1B1	Cytochrome P450, Family 1, Subfamily B, Polypeptide 1	-2.08	0.86
PIGK	Phosphatidylinositol Glycan, Class K	-2.08	0.88
ATP6AP2	Atpase, H+ Transporting, Lysosomal Accessory Protein 2	-2.07	0.87
A_24_P161393	-	-2.07	0.85
IRAK1	Interleukin-1 Receptor-Associated Kinase 1	-2.07	0.84
CD83	Cd83 Antigen (Activated B Lymphocytes, Immunoglobulin Superfamily)	-2.07	0.79
COL5A1	Collagen, Type V, Alpha 1	-2.07	0.86
TUBB2	Tubulin, beta 2A	-2.06	0.85
FLJ20718	Hypothetical Protein Flj20718	-2.06	0.86
ANXA5	Annexin A5	-2.06	0.87
TNMD	Tenomodulin	-2.06	0.77
ZNF655	Zinc Finger Protein 655	-2.06	0.92

MTHFD1L	Methylenetetrahydrofolate Dehydrogenase (Nadp+ Dependent) 1-Like	-2.06	0.92
TAF10	Taf10 Rna Polymerase Ii, Tata Box Binding Protein (Tbp)-Associated Factor, 30kda	-2.06	0.90
HLA-DQA2	Major Histocompatibility Complex, Class Ii, Dq Alpha 1	-2.06	0.86
BZW1	Basic Leucine Zipper And W2 Domains 1	-2.06	0.90
PDE4DIP	Phosphodiesterase 4d Interacting Protein (Myomegalin)	-2.06	0.88
C9orf105	Chromosome 9 Open Reading Frame 105	-2.06	0.92
M6PR	Mannose-6-Phosphate Receptor (Cation Dependent)	-2.06	0.92
FTHL7	Ferritin, Heavy Polypeptide-Like 7	-2.06	0.90
PKM2	Pyruvate Kinase, Muscle	-2.05	0.83
LOC441168	-	-2.04	0.88
MYO1E	Myosin Ie	-2.04	0.90
ENST00000303246	-	-2.04	0.89
ZMPSTE24	Zinc Metallopeptidase (Ste24 Homolog, Yeast)	-2.04	0.90
HIST1H1C	Histone 1, H1c	-2.03	0.80
CCT2	Chaperonin Containing Tcp1, Subunit 2 (Beta)	-2.03	0.92
SULT1A1	Sulfotransferase Family, Cytosolic, 1a, Phenol-Preferring, Member 1	-2.03	0.88
SGCB	Sarcoglycan, Beta (43kda Dystrophin-Associated Glycoprotein)	-2.02	0.90
MYD88	Myeloid Differentiation Primary Response Gene (88)	-2.02	0.87
SRPX2	Sushi-Repeat-Containing Protein, X-Linked 2	-2.02	0.83
FLJ22833	-	-2.02	0.83
A_24_P32735	-	-2.02	0.87
A_24_P929650	-	-2.02	0.85
PLD3	Phospholipase D Family, Member 3	-2.02	0.83
C9orf80	Chromosome 9 Open Reading Frame 80	-2.01	0.90
ATP5J2	Atp Synthase, H+ Transporting, Mitochondrial F0 Complex, Subunit F2	-2.01	0.89
RAB35	Rab35, Member Ras Oncogene Family	-2.01	0.91
SERF2	Small Edrk-Rich Factor 2	-2.00	0.89
GM2A	Gm2 Ganglioside Activator	-2.00	0.83
C2orf7	Chromosome 2 Open Reading Frame 7	-2.00	0.92
BOLA2	Bola-Like 2 (E. Coli)	-2.00	0.90
SAT	Spermidine/Spermine N1-Acetyltransferase	-2.00	0.87
UBL5	Ubiquitin-Like 5	-2.00	0.92
SCCPDH	Saccharopine Dehydrogenase (Putative)	-2.00	0.90
TUBB4	Tubulin, Beta 4	-2.00	0.87
LOC92482	Hypothetical Protein Loc92482	-1.99	0.91
HIG1	HIG1 domain family, member 1A	-1.99	0.88
HLA-DPA1	Major Histocompatibility Complex, Class Ii, Dp Alpha 1	-1.99	0.88
PIGF	Phosphatidylinositol Glycan, Class F	-1.99	0.91
CGI-116	-	-1.99	0.93
A_24_P58607	-	-1.98	0.93
FLJ20186	Hypothetical Protein Flj20186	-1.98	0.92

LSP1	Lymphocyte-Specific Protein 1	-1.98	0.83
PPIA	Peptidylprolyl Isomerase A (Cyclophilin A)	-1.97	0.90
PX19	Px19-Like Protein	-1.97	0.91
LCP2	Lymphocyte Cytosolic Protein 2 (Sh2 Domain Containing Leukocyte Protein Of 76kda)	-1.97	0.90
INSIG1	Insulin Induced Gene 1	-1.97	0.87
LOC388135	Similar To Riken Cdna 6030419c18 Gene	-1.96	0.88
KSP37	Ksp37 Protein	-1.96	0.90
TLE2	Transducin-Like Enhancer Of Split 2 (E(Sp1) Homolog, Drosophila)	-1.96	0.88
TPM3	Tropomyosin 3	-1.95	0.91
OTUB1	Otu Domain, Ubiquitin Aldehyde Binding 1	-1.95	0.92
RABEP1	Rabaptin, Rab Gtpase Binding Effector Protein 1	-1.95	0.93
BST1	Bone Marrow Stromal Cell Antigen 1	-1.95	0.89
PLAU	Plasminogen Activator, Urokinase	-1.95	0.85
KIAA1949	Kiaa1949	-1.95	0.89
SEC23B	Sec23 Homolog B (S. Cerevisiae)	-1.95	0.90
TMP21	Transmembrane emp24-like trafficking protein 10 (yeast)	-1.94	0.89
ZNF219	Zinc Finger Protein 219	-1.94	0.87
TXNL1	Thioredoxin-Like 1	-1.94	0.93
RP2	Retinitis Pigmentosa 2 (X-Linked Recessive)	-1.94	0.83
CNKSR3	Cnksr Family Member 3	-1.94	0.87
ENST00000327665	-	-1.93	0.88
ARHGAP4	Rho Gtpase Activating Protein 4	-1.93	0.86
HLA-DPB1	Major Histocompatibility Complex, Class Ii, Dp Beta 1	-1.93	0.87
ACTG1	Actin, Beta	-1.93	0.85
MGC2941	PHD finger protein 23	-1.93	0.91
TXNL2	Thioredoxin-Like 2	-1.93	0.93
A_23_P58072	-	-1.93	0.91
PITPNA	Phosphatidylinositol Transfer Protein, Alpha	-1.92	0.92
UBQLN1	Ubiquilin 1	-1.92	0.92
LAIR1	Leukocyte-Associated Ig-Like Receptor 1	-1.92	0.87
Dietary Intervention (DI)	***Up Regulated Genes***		
THC2374684	-	5.18	1.22
SLC7A10	Hypothetical Protein Flj20839	4.50	1.26
GLUL	Glutamate-Ammonia Ligase (Glutamine Synthetase)	4.10	1.42
NFIA	Nuclear Factor I/A	3.96	1.23
PTPN13	Protein Tyrosine Phosphatase, Non-Receptor Type 13 (Apo-1/Cd95 (Fas)-Associated Phosphatase)	3.86	1.17
THC2305303	-	3.82	1.19
TWIST1	Twist Homolog 1 (Acrocephalosyndactyly 3; Saethre-Chotzen Syndrome) (Drosophila)	3.77	1.22
HIG2	Hypoxia-Inducible Protein 2	3.76	1.22
THC2389705	-	3.74	1.38

HLF	Hepatic Leukemia Factor	3.73	1.24
ADH1B	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	3.52	1.34
TF	Transferrin	3.49	1.25
KIAA0657	-	3.48	1.21
ZBTB20	Zinc Finger And Btb Domain Containing 20	3.47	1.48
ANG	Angiogenin, Ribonuclease, Rnase A Family, 5	3.46	1.20
TF	Transferrin	3.45	1.32
AHCTF1	At Hook Containing Transcription Factor 1	3.44	1.15
FIGF	C-Fos Induced Growth Factor (Vascular Endothelial Growth Factor D)	3.44	1.21
ENST00000315208	-	3.40	1.21
LOC440234	-	3.33	1.34
THC2315024	-	3.30	1.33
ZNF395	Hypothetical Protein Dkfzp434k1210	3.30	1.19
BC016022	-	3.27	1.40
EIF4B	Eukaryotic Translation Initiation Factor 4b	3.26	1.20
EBF	Early B-Cell Factor	3.25	1.21
SNTB2	Syntrophin, Beta 2 (Dystrophin-Associated Protein A1, 59kda, Basic Component 2)	3.23	1.18
GPD1L	Glycerol-3-Phosphate Dehydrogenase 1-Like	3.22	1.27
GNG7	Guanine Nucleotide Binding Protein (G Protein), Gamma 7	3.19	1.17
PPAP2B	Phosphatidic Acid Phosphatase Type 2b	3.18	1.30
LGI4	Leucine-Rich Repeat Lgi Family, Member 4	3.16	1.16
KIAA0485	Kiaa0485 Protein	3.15	1.50
AK022045	-	3.14	1.74
EBF3	Early B-Cell Factor 3	3.14	1.20
AFF1	Af4/Fmr2 Family, Member 1	3.13	1.23
ADSSL1	Adenylosuccinate Synthase Like 1	3.10	1.32
PHIP	Pleckstrin Homology Domain Interacting Protein	3.09	1.21
TNN	Tenascin N	3.08	1.31
RAI2	Retinoic Acid Induced 2	3.08	1.26
MYCBP2	Myc Binding Protein 2	3.08	1.20
A_24_P212997	-	3.06	1.22
LRIG1	Leucine-Rich Repeats And Immunoglobulin-Like Domains 1	3.05	1.21
BC023570	-	3.04	1.13
USP48	Hypothetical Protein Flj11328	3.01	1.13
RGS22	Regulator Of G-Protein Signalling 22	3.00	1.17
ENST00000325055	-	2.95	1.29
ALMS1	Alstrom Syndrome 1	2.93	1.12
MGC39325	-	2.91	1.15
AK055214	-	2.90	1.20
SFRS5	Splicing Factor, Arginine/Serine-Rich 5	2.87	1.29
ENST00000244221	-	2.86	1.17
SPPL3	Signal peptide peptidase 3	2.85	1.13
DAPK2	Death-Associated Protein Kinase 2	2.84	1.24

S100PBPR	S100P binding protein	2.80	1.14
LOC90799	-	2.78	1.20
FAM13A1	Family With Sequence Similarity 13, Member A1	2.76	1.30
AK022044	-	2.76	1.34
THRAP2	Thyroid Hormone Receptor Associated Protein 2	2.75	1.18
AF321617	-	2.75	1.14
RPS6KA5	Ribosomal Protein S6 Kinase, 90kda, Polypeptide 5	2.75	1.12
ZBTB16	Zinc Finger And Btb Domain Containing 16	2.74	1.25
ZNF395	Hypothetical Protein Dkfzp434k1210	2.72	1.18
HOXA5	Homeobox A5	2.71	1.19
GPRASP1	G Protein-Coupled Receptor Associated Sorting Protein 1	2.71	1.19
INE1	Inactivation Escape 1	2.70	1.27
AK021980	-	2.70	1.26
HOXA3	Homeobox A3	2.69	1.19
BC018597	-	2.69	1.22
CR619603	-	2.69	1.17
ZC3H6	Zinc Finger Ccch-Type Containing 6	2.67	1.19
CKLFSF8	CKLF-like MARVEL transmembrane domain containing 8	2.67	1.16
THC2436690	-	2.66	1.19
AF087999	-	2.66	1.21
PNMA3	Paraneoplastic Antigen Ma3	2.66	1.18
LOC388466	-	2.66	1.27
A_24_P332292	-	2.65	1.17
PFKFB3	6-Phosphofructo-2-Kinase/Fructose-2,6-Biphosphatase 3	2.64	1.20
MAP3K4	Mitogen-Activated Protein Kinase Kinase Kinase 4	2.64	1.12
TJP1	Tight Junction Protein 1 (Zona Occludens 1)	2.63	1.21
LOC157562	Hypothetical Protein Loc157562	2.61	1.15
BAZ2A	Bromodomain Adjacent To Zinc Finger Domain, 2a	2.61	1.12
MLL	Myeloid/Lymphoid Or Mixed-Lineage Leukemia (Trithorax Homolog, Drosophila)	2.60	1.27
FOXJ3	Forkhead Box J3	2.58	1.14
EBF3	Early B-Cell Factor 3	2.57	1.21
ENST00000262795	-	2.57	1.30
DCP1B	Dcp1 Decapping Enzyme Homolog B (S. Cerevisiae)	2.56	1.13
C1orf115	Chromosome 1 Open Reading Frame 115	2.55	1.11
AZGP1	Alpha-2-Glycoprotein 1, Zinc	2.54	1.26
NRIP1	Nuclear Receptor Interacting Protein 1	2.54	1.23
LOC283487	Hypothetical Protein Loc283487	2.52	1.33
PARD3	Par-3 Partitioning Defective 3 Homolog (C. Elegans)	2.49	1.10
SMARCC2	Swi/Snf Related, Matrix Associated, Actin Dependent Regulator Of Chromatin, Subfamily C, Member 2	2.48	1.17
NEK3	Nima (Never In Mitosis Gene A)-Related Kinase 3	2.47	1.19

Supplementary Table A2: Validation of microarray gene expression data by reverse transcription-quantitative PCR (RT-qPCR)

		Microarray (n=8)			RT-qPCR (n=15-22)		
Gene symbol	Gene name	ER	WS	DI	ER	WS	DI
		Adipocytes					
ANGPTL4	Angiopoietin-like 4	1.28 ± 0.04 *	0.63 ± 0.06 *	0.82 ± 0.07 *	1.29 ± 0.10 *	0.76 ± 0.09	0.94 ± 0.12
AZGP1	Alpha-2-glycoprotein 1, zinc	0.94 ± 0.02	1.36 ± 0.11 *	1.25 ± 0.08 *	0.94 ± 0.11	1.38 ± 0.19	1.21 ± 0.15
CES1	Carboxylesterase 1	0.70 ± 0.05 *	1.08 ± 0.11	0.75 ± 0.06 *	0.68 ± 0.05 *	1.31 ± 0.13	0.85 ± 0.08 *
HP	Haptoglobin	0.37 ± 0.09 *	2.70 ± 0.70 *	0.79 ± 0.18	0.40 ± 0.09 *	3.31 ± 0.96 *	0.86 ± 0.22
IGF1	Insulin-like growth factor 1	0.86 ± 0.04 *	1.42 ± 0.10 *	1.23 ± 0.11	0.75 ± 0.09 *	1.49 ± 0.22	1.12 ± 0.26
IRS1	Insulin receptor substrate 1	0.83 ± 0.06 *	1.45 ± 0.08 *	1.20 ± 0.11	0.69 ± 0.09 *	1.88 ± 0.40 *	1.28 ± 0.31
THBS1	Thrombospondin 1	1.2 ± 0.07	0.72 ± 0.06 *	0.91 ± 0.12	1.22 ± 0.12	0.66 ± 0.09 *	0.75 ± 0.10 *
		Macrophages					
ACP5	Acid phosphatase 5, tartrate resistant	1.87 ± 0.33	0.32 ± 0.039 *	0.63 ± 0.12	3.42 ± 0.88 *	0.3 ± 0.06 *	0.65 ± 0.09 *
CD68	CD68 molecule	1.21 ± 0.11	0.59 ± 0.047 *	0.72 ± 0.08 *	2.16 ± 0.45 *	0.46 ± 0.06 *	0.71 ± 0.06 *
FCGBP	Fc fragment of IgG binding protein	1.62 ± 0.26	0.54 ± 0.172 *	0.62 ± 0.08 *	2.57 ± 0.44 *	0.29 ± 0.07 *	0.53 ± 0.08 *
LIPA	Lipase A, lysosomal acid, cholesterol esterase (Wolman disease)	1.51 ± 0.23	0.45 ± 0.039 *	0.64 ± 0.08 *	2.18 ± 0.36 *	0.45 ± 0.06 *	0.73 ± 0.06 *
MSR1	Macrophage scavenger receptor 1	1.12 ± 0.07	0.63 ± 0.053	0.72 ± 0.07 *	2.46 ± 0.56 *	0.35 ± 0.06 *	0.58 ± 0.08 *
PLA2G7	Phospholipase A2, group VII (platelet-activating factor acetylhydrolase. plasma)	1.55 ± 0.25	0.43 ± 0.073 *	0.54 ± 0.08 *	3.9 ± 1.11 *	0.31 ± 0.09 *	0.64 ± 0.12 *
SPP1	Secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1)	1.73 ± 0.36	0.38 ± 0.147 *	0.45 ± 0.09 *	4.43 ± 1.44 *	0.24 ± 0.05 *	0.54 ± 0.08 *
CCRL2	Chemokine (C-C motif) receptor-like 2	1.11 ± 0.07	0.84 ± 0.032 *	0.85 ± 0.04 *	1.57 ± 0.19 *	0.73 ± 0.08 *	0.94 ± 0.07 *
CD163	CD163 molecule	1.15 ± 0.09	0.59 ± 0.056 *	0.65 ± 0.08 *	1.47 ± 0.23 *	0.57 ± 0.06 *	0.68 ± 0.05 *
CD33	CD33 molecule	1.06 ± 0.05	0.83 ± 0.041 *	0.88 ± 0.02 *	1.69 ± 0.24 *	0.51 ± 0.16 *	0.66 ± 0.11 *
FCGR2B	Fc fragment of IgG, low affinity IIb, receptor (CD32)	1 ± 0.06	0.75 ± 0.05 *	0.74 ± 0.05 *	1.37 ± 0.15 *	0.66 ± 0.08 *	0.77 ± 0.06 *
IRF5	Interferon regulatory factor 5	1.08 ± 0.06	0.73 ± 0.036 *	0.78 ± 0.05 *	1.52 ± 0.21 *	0.57 ± 0.05 *	0.74 ± 0.05 *
KYNU	Kynureninase (L-kynurenine hydrolase)	1.03 ± 0.09	0.7 ± 0.028 *	0.72 ± 0.07 *	1.82 ± 0.26 *	0.48 ± 0.06 *	0.71 ± 0.07 *
MS4A4A	Membrane-spanning 4-domains, subfamily A, member 4	1.11 ± 0.09	0.62 ± 0.061 *	0.7 ± 0.08 *	1.53 ± 0.28 *	0.59 ± 0.11 *	0.7 ± 0.08 *
MS4A7	Membrane-spanning 4-domains, subfamily A, member 7	1.16 ± 0.12	0.68 ± 0.054 *	0.72 ± 0.07 *	1.72 ± 0.26 *	0.52 ± 0.06 *	0.72 ± 0.07 *
SLCO2B1	Solute carrier organic anion transporter family, member 2B1	1.14 ± 0.1	0.68 ± 0.069 *	0.72 ± 0.06 *	1.64 ± 0.21 *	0.51 ± 0.06 *	0.7 ± 0.07 *
CD14	CD14 molecule	0.98 ± 0.09	0.76 ± 0.052 *	0.73 ± 0.06 *	1.36 ± 0.15 *	0.62 ± 0.05 *	0.75 ± 0.05 *
CD209	CD209 molecule	0.97 ± 0.07	0.92 ± 0.041	0.83 ± 0.05 *	1.37 ± 0.14 *	0.65 ± 0.06 *	0.78 ± 0.07 *

CENTA2	Centaurin, alpha 2	1.05 ± 0.06	0.8 ± 0.069 *	0.82 ± 0.07 *	1.36 ± 0.16 *	0.67 ± 0.06 *	0.77 ± 0.05 *
CLEC10A	C-type lectin domain family 10, member A	0.96 ± 0.07	0.87 ± 0.061	0.81 ± 0.07	1.19 ± 0.14 *	0.76 ± 0.08 *	0.81 ± 0.08 *
CTSS	Cathepsin S	1.21 ± 0.09	0.62 ± 0.04 *	0.76 ± 0.08 *	1.26 ± 0.13	0.62 ± 0.09 *	0.71 ± 0.08 *
GATM	Glycine amidinotransferase (L-arginine:glycine amidinotransferase)	1.08 ± 0.05	0.76 ± 0.029 *	0.83 ± 0.04 *	1.33 ± 0.13 *	0.68 ± 0.06 *	0.8 ± 0.04 *
HLA-DMA	major histocompatibility complex, class II. DM alpha	1.04 ± 0.05	0.85 ± 0.034 *	0.86 ± 0.03 *	1.26 ± 0.08 *	0.8 ± 0.06 *	0.95 ± 0.06 *
HLA-DMB	Major histocompatibility complex, class II, DM B	1.08 ± 0.04	0.76 ± 0.04 *	0.84 ± 0.06 *	1.11 ± 0.11	0.70 ± 0.11 *	0.75 ± 0.13
HLA-DRA	major histocompatibility complex, class II, DR alpha	1.08 ± 0.04	0.76 ± 0.039 *	0.83 ± 0.06	1.25 ± 0.09 *	0.78 ± 0.06 *	0.91 ± 0.06 *
MARCO	Macrophage receptor with collagenous structure	0.95 ± 0.14	0.76 ± 0.096	0.63 ± 0.08 *	1.29 ± 0.14 *	0.54 ± 0.06 *	0.65 ± 0.1 *
MS4A6A	Membrane-spanning 4-domains, subfamily A, member 6A	1,04 ± 0,08	0,74 ± 0,047 *	0,77 ± 0,05 *	1,34 ± 0,17 *	0,64 ± 0,06 *	0,74 ± 0,06 *
TLR7	Toll-like receptor 7	0,98 ± 0,03	0,91 ± 0,023	0,86 ± 0,03	1,35 ± 0,2 *	0,73 ± 0,08 *	0,83 ± 0,08 *
FCN1	Ficolin (collagen/fibrinogen domain containing) 1	0,85 ± 0,07 *	1,21 ± 0,156	1,05 ± 0,16	1,13 ± 0,14	1,54 ± 0,27	1,34 ± 0,19
SNCA	Synuclein, alpha (non A4 component of amyloid precursor)	0,93 ± 0,06	0,98 ± 0,157	0,89 ± 0,14	1,36 ± 0,2	1,64 ± 0,42	1,83 ± 0,52
		Other cell types & no cell specificity					
ALOX5AP	Arachidonate 5-lipoxygenase-activating protein	0.97 ± 0.08	0.87 ± 0.05 *	0.86 ± 0.09	1.05 ± 0.12	0.84 ± 0.11 *	0.83 ± 0.10
FN1	Fibronectin 1	1.00 ± 0.09	0.86 ± 0.07	0.84 ± 0.04 *	1.01 ± 0.12	0.99 ± 0.13	0.90 ± 0.12 *
ITGAX	Integrin, alpha X (CD11c)	1.30 ± 0.16	0.62 ± 0.02 *	0.78 ± 0.10	2,66 ± 0,65 *	0,72 ± 0,19 *	1,02 ± 0,2
LOX	Lysyl oxidase	0.80 ± 0.03 *	1.16 ± 0.06	0.90 ± 0.03	0.68 ± 0.05 *	1.27 ± 0.14 *	0.80 ± 0.06 *
PLAT	Plasminogen activator, tissue	0.90 ± 0.05	1.36 ± 0.14 *	1.16 ± 0.09	0.76 ± 0.08 *	1.46 ± 0.2 *	1.04 ± 0.12
SOD2	Superoxide dismutase 2, mitochondrial	0.92 ± 0.07	0.97 ± 0.06	0.85 ± 0.03 *	1.02 ± 0.07	0.88 ± 0.11	0.84 ± 0.08
S100A8	S100 calcium binding protein a8	0.72 ± 0.16 *	2.83 ± 0.91	2.12 ± 0.81	0.70 ± 0.18 *	1.88 ± 0.47	0.90 ± 0.14
WBSCR14	MLX interacting protein-like (ChREBP)	0.95 ± 0.06	1.35 ± 0.13 *	1.26 ± 0.11	0.83 ± 0.07 *	1.41 ± 0.14	1.14 ± 0.12

Results are expressed as mean fold change (±S.E.M) during each phase. * $p < 0.05$ vs. Basal. The cellular origin of the genes was determined by microarray analysis of gene expression in the different cellular fractions of human AT (see Methods).

Supplementary Table A3 : Information on reporter metabolites and metabolic networks
Reporter Metabolite analysis was based on two recently published high-confidence models of human metabolism [1-3]. Based on reconstructions of metabolism, reporter metabolite analysis identifies socalled reporter metabolites, which are metabolites that are surrounded by a significant degree of differential expression in their associated enzymes.

A: Selected Reporter Metabolites based on the EHMN (Edinburgh human metabolic network) model of metabolism

	ER			WS		
Reporter Metabolite	**P-value**	**# Upregulated Enzymes**	**# Downregulated Enzymes**	**P-value**	**# Upregulated Enzymes**	**# Downregulated Enzymes**
Acyl-CoA	0,000	0	6	0,003	4	3
CoA	0,002	6	15	0,004	16	9
NADP+ / NADPH	0,020	6	16	0,196	13	7
Acetyl-CoA	0,035	2	10	0,074	11	3
Ubiquinol / ubiquinone	0,047	0	10	0,369	12	0

B: Selected Reporter Metabolites based on the Recon1 (Global reconstruction of the human metabolic network based on genomic and bibliomic data 1) model of metabolism

	ER			WS		
Reporter Metabolite	**P-value**	**# Upregulated Enzymes**	**# Downregulated Enzymes**	**P-value**	**# Upregulated Enzymes**	**# Downregulated Enzymes**
Acetyl-CoA (mitochondria)	0,08	0	3	0,0214	2	1
Acetyl-CoA (cytosol)	0,21	0	4	0,0394	2	2
CoA (mitochondria)	0,11	1	4	0,0531	5	2
CoA (cytosol)	0,18	2	8	0,0824	5	4
Ubiquinol-10 / ubiquinone-10 (mitochondria)	0,05	0	12	0,3743	13	0
Ferricytochrome c / ferrocytochrome c (mitochondria)	0,02	0	6	0,2167	4	0

C: Overview of Genes, Reactions, and Metabolites in the Recon1 and EHMN reconstructions

		Genes	Reactions	Metabolites
EHMN	**ER**	299	701	1044
	WS	289	673	979
	DI	285	657	965
Recon1	**ER**	156	336	622
	WS	152	333	630
	DI	151	329	616

Number of unique genes, reactions, and metabolites in both the EHMN and Recon1 metabolic reconstructions.

D: EHMN reporter metabolite enzyme neighbours

	ER		WS	
Reporter Metabolite	**Upregulated Enzymes**	**Downregulated Enzymes**	**Upregulated Enzymes**	**Downregulated Enzymes**
Acyl-CoA		10249,137964,2181,51,56894,84649	10249,2181,51,84649	137964,56894,6646
CoA	10724,1387,27349,4836,9397,9517	10249,137964,1666,1737,2181,30,3033,38,39,51,55902,56894,6303,84649,9329	10249,10724,10965,1666,1737,212,2181,30,3033,38,4967,51,55902,84649,9329,9517	137964,211,39,4836,5538,56894,6303,6646,9397
NADP+ / NADPH	124,128,1595,2531,260293,4200	10327,1645,1666,1719,1737,30,3033,3292,4199,51,51144,60496,6319,7108,8659,9380	1645,1666,1719,1737,260293,30,3033,3292,4199,51,6319,7108,9380	10327,124,128,2531,29920,60496,8659
Acetyl-CoA	10724,1387	1666,1737,30,3033,38,39,51,55902,6303,9329	10724,10965,1666,1737,212,30,3033,38,51,55902,9329	211,39,6303
Ubiquinol / ubiquinone		4694,4695,4700,4705,4713,4715,4718,4731,6389,6392	374291,4694,4695,4697,4700,4705,4713,4715,4718,4731,6389,6392	

Entrez Ids of the selected reporter metabolites based on the EHMN network analysis.

E: Recon1 reporter metabolite enzyme neighbours

	ER		WS	
Reporter Metabolite	**Upregulated Enzymes**	**Downregulated Enzymes**	**Upregulated Enzymes**	**Downregulated Enzymes**
Acetyl-CoA (mitochondria)		38,39,55902	38,55902	39
Acetyl-CoA (cytosol)		38,39,55902,6303	38,55902	39,6303
CoA (mitochondria)	27349	26275,38,39,55902	212,26275,38,4967,55902	211,39
CoA (cytosol)	27349,9517	137964,2181,26275,38,39,55902,56894,6303	2181,26275,38,55902,9517	137964,39,56894,6303
Ubiquinol-10 / ubiquinone-10 (mitochondria)		10975,29796,4694,4695,4700,4705,4713,4715,4718,4731,7386,7388	10975,29796,374291,4694,4695,4697,4700,4705,4713,4715,4718,4731,7386	
Ferricytochrome c / ferrocytochrome c (mitochondria)		10975, 1327, 29796,7386, 7388, 9377	10975, 29796, 7386, 9377	

Entrez Ids of the selected reporter metabolites based on the Recon1 network analysis.

1. Duarte NC, Becker SA, Jamshidi N, Thiele I, Mo ML, Vo TD, Srivas R, Palsson BO: Global reconstruction of the human metabolic network based on genomic and bibliomic data. Proc Natl Acad Sci U S A 104:1777-1782, 2007

2. Ma H, Sorokin A, Mazein A, Selkov A, Selkov E, Demin O, Goryanin I: The Edinburgh human metabolic network reconstruction and its functional analysis. Mol Syst Biol 3:135, 2007

3. Petersen M, Taylor MA, Saris WHM, Verdich C, Toubro S, MacDonald IA, Rössner S, Stich V, Guy-Grand B, Langin D, Martinez A, Perdersen O, Holst C, Sorensen TIA, Astrup A, NUGENOB: Randomised, multi-centre trial of two hypoenergetic diets with different fat content in obese subjects. Int J Obes 30:552-560, 2005.

Supplementary Table A4: List of differentially expressed genes during dietary intervention program encoding secreted proteins according to a signal peptide prediction.

Gene Symbol	Gene Name
Energy Restriction (ER)	Down Regulated Genes
FMOD	Fibromodulin
NMB	Neuromedin B
THBS4	Thrombospondin 4
HP	Haptoglobin
LOX	Lysyl Oxidase
MXRA5	Matrix-Remodelling Associated 5
DHCR24	24-Dehydrocholesterol Reductase
CKMT2	Creatine Kinase, Mitochondrial 2 (Sarcomeric)
AQP1	Aquaporin 1 (Colton Blood Group)
COMP	Cartilage Oligomeric Matrix Protein
PPAP2A	Phosphatidic Acid Phosphatase Type 2a
CXCL9	Chemokine (C-X-C Motif) Ligand 9
GCSH	Glycine Cleavage System Protein H (Aminomethyl Carrier)
TF	Transferrin
AGT	Angiotensinogen (Serpin Peptidase Inhibitor, Clade A, Member 8)
BENE	Mal, T-cell differentiation protein-like
LOX	Lysyl Oxidase
C20orf7	Chromosome 20 Open Reading Frame 7
LAIR1	Leukocyte-Associated Ig-Like Receptor 1
TMEM14B	Transmembrane Protein 14b
PCDH12	Protocadherin 12
ICAM3	Intercellular Adhesion Molecule 3
CDH13	Cadherin 13, H-Cadherin (Heart)
MMP15	Matrix Metallopeptidase 15 (Membrane-Inserted)
LOXL2	Lysyl Oxidase-Like 2
LAMB3	Laminin, Beta 3
C14orf147	Chromosome 14 Open Reading Frame 147
SAA4	Serum Amyloid A4, Constitutive
RetSat	All-Trans-13,14-Dihydroretinol Saturase
RDH5	Retinol Dehydrogenase 5 (11-Cis And 9-Cis)
SLC16A7	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 7
OXCT1	3-Oxoacid Coa Transferase 1
MYEOV	Myeloma Overexpressed Gene (In A Subset Of T(11;14) Positive Multiple Myelomas)
GLRX2	Glutaredoxin 2
SFRP2	Secreted Frizzled-Related Protein 2
UCRC	Ubiquinol-Cytochrome C Reductase Complex (7.2 Kd)

C1orf102	Chromosome 1 Open Reading Frame 102
TMEM14C	Transmembrane Protein 14c
CYBASC3	Cytochrome B, Ascorbate Dependent 3
IMPA3	Inositol monophosphatase domain containing 1
FAM82C	Family With Sequence Similarity 82, Member C
TNC	Tenascin C (Hexabrachion)
MRPS15	Mitochondrial Ribosomal Protein S15
MGC23909	Hypothetical Protein Mgc23909
BF373107	-
PON2	Paraoxonase 2
AGPAT3	1-Acylglycerol-3-Phosphate O-Acyltransferase 3
FLJ25530	Hepatocyte Cell Adhesion Molecule
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)
GPRC5C	G Protein-Coupled Receptor, Family C, Group 5, Member C
LOC400969	-
HSPA12A	Heat Shock Protein 12a
EPHX2	Epoxide Hydrolase 2, Cytoplasmic
SIL1	Sil1 Homolog, Endoplasmic Reticulum Chaperone (S. Cerevisiae)
ASAH1	N-Acylsphingosine Amidohydrolase (Acid Ceramidase) 1
ATP5J	Atp Synthase, H+ Transporting, Mitochondrial F0 Complex, Subunit F6
TCTA	T-Cell Leukemia Translocation Altered Gene
ADAMTS2	Adam Metallopeptidase With Thrombospondin Type 1 Motif, 2
TSPAN18	Tetraspanin 18
BC035751	-
CD164	Cd164 Antigen, Sialomucin
SLC35B4	Solute Carrier Family 35, Member B4
FCN1	Ficolin (Collagen/Fibrinogen Domain Containing) 1
MOSC1	Moco Sulphurase C-Terminal Domain Containing 1
COL5A2	Collagen, Type V, Alpha 2
LFNG	Lunatic Fringe Homolog (Drosophila)
SDHD	Succinate Dehydrogenase Complex, Subunit D, Integral Membrane Protein
RARRES2	Retinoic Acid Receptor Responder (Tazarotene Induced) 2
A_24_P745670	-
PCCB	Propionyl Coenzyme A Carboxylase, Beta Polypeptide
MMP28	Matrix Metallopeptidase 28
LRIG1	Leucine-Rich Repeats And Immunoglobulin-Like Domains 1
NDUFS3	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 3, 30kda (Nadh-Coenzyme Q Reductase)
APLN	Apelin, Agtrl1 Ligand
TFPI2	Tissue Factor Pathway Inhibitor 2
BCKDHB	Branched Chain Keto Acid Dehydrogenase E1, Beta Polypeptide (Maple Syrup Urine Disease)

LRRN5	Leucine Rich Repeat Neuronal 5
COG8	Component Of Oligomeric Golgi Complex 8
TNFRSF21	Tumor Necrosis Factor Receptor Superfamily, Member 21
PCCB	Propionyl Coenzyme A Carboxylase, Beta Polypeptide
LRRN6A	Leucine Rich Repeat Neuronal 6a
MPZL1	Myelin Protein Zero-Like 1
NDUFS2	Nadh Dehydrogenase (Ubiquinone) Fe-S Protein 2, 49kda (Nadh-Coenzyme Q Reductase)
PNPLA4	Patatin-Like Phospholipase Domain Containing 4
COL4A1	Collagen, Type Iv, Alpha 1
NDUFB5	Nadh Dehydrogenase (Ubiquinone) 1 Beta Subcomplex, 5, 16kda
NDUFV2	Nadh Dehydrogenase (Ubiquinone) Flavoprotein 2, 24kda
PXMP2	Peroxisomal Membrane Protein 2, 22kda
C2orf7	Chromosome 2 Open Reading Frame 7
NIPSNAP3A	Nipsnap Homolog 3a (C. Elegans)
P4HB	Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide
FXYD6	Fxyd Domain Containing Ion Transport Regulator 6
C3orf1	Chromosome 3 Open Reading Frame 1
CLYBL	Citrate Lyase Beta Like
SDHD	Succinate Dehydrogenase Complex, Subunit D, Integral Membrane Protein
BG952851	-
ITGA6	Integrin, Alpha 6
QIL1	Qil1 Protein
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)
ALG5	Asparagine-Linked Glycosylation 5 Homolog (Yeast, Dolichyl-Phosphate Beta-Glucosyltransferase)
NDUFA1	Nadh Dehydrogenase (Ubiquinone) 1 Alpha Subcomplex, 1, 7.5kda
SPCS3	Signal Peptidase Complex Subunit 3 Homolog (S. Cerevisiae)
MGC19780	-
MMP17	Matrix Metallopeptidase 17 (Membrane-Inserted)
THC2442304	-
CD164	Cd164 Antigen, Sialomucin
NID2	Nidogen 2 (Osteonidogen)
NPB	Neuropeptide B
PHB	Prohibitin
ENG	Endoglin (Osler-Rendu-Weber Syndrome 1)
C10orf74	-
TRA1	Heat shock protein 90kDa beta (Grp94), member 1
GPAA1	Glycosylphosphatidylinositol Anchor Attachment Protein 1 Homolog (Yeast)

Energy Restriction (ER)	Up Regulated Genes
RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1

EDN1	Endothelin 1
ROBO3	Roundabout, Axon Guidance Receptor, Homolog 3 (Drosophila)
GPX3	Glutathione Peroxidase 3 (Plasma)
ANGPTL4	Angiopoietin-Like 4
C7	Complement Component 7
HTRA3	Htra Serine Peptidase 3
MAN2A2	Mannosidase, Alpha, Class 2a, Member 2
C9orf111	Hypothetical Protein Flj31318

Weight Stabilization (WS)	***Down Regulated Genes***
ITGAX	Integrin, Alpha X (Complement Component 3 Receptor 4 Subunit)
SLAMF8	Slam Family Member 8
GDF15	Growth Differentiation Factor 15
LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)
CD52	Cd52 Antigen (Campath-1 Antigen)
RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1
CTSB	Cathepsin B
ACP5	Acid Phosphatase 5, Tartrate Resistant
HCST	Hematopoietic Cell Signal Transducer
CHI3L1	Chitinase 3-Like 1 (Cartilage Glycoprotein-39)
TYROBP	Tyro Protein Tyrosine Kinase Binding Protein
GLIPR1	Gli Pathogenesis-Related 1 (Glioma)
CPVL	Carboxypeptidase, Vitellogenic-Like
ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)
IFI30	Interferon, Gamma-Inducible Protein 30
GLA	Galactosidase, Alpha
DHRS9	Dehydrogenase/Reductase (Sdr Family) Member 9
CD53	Cd53 Antigen
RNASET2	Ribonuclease T2
CTSS	Cathepsin S
PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor Acetylhydrolase, Plasma)
ITGB5	Integrin, Beta 5
HEXB	Hexosaminidase B (Beta Polypeptide)
IL4I1	Interleukin 4 Induced 1
A_23_P170719	-
ITGAM	Integrin, Alpha M (Complement Component 3 Receptor 3 Subunit)
PPT1	Palmitoyl-Protein Thioesterase 1 (Ceroid-Lipofuscinosis, Neuronal 1, Infantile)
EMILIN2	Elastin Microfibril Interfacer 2
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)
LHFPL2	Lipoma Hmgic Fusion Partner-Like 2

SPINT2	Serine Peptidase Inhibitor, Kunitz Type, 2
GPX3	Glutathione Peroxidase 3 (Plasma)
ATP6V0B	Atpase, H+ Transporting, Lysosomal 21kda, V0 Subunit B
HAVCR2	Hepatitis A Virus Cellular Receptor 2
ANGPTL4	Angiopoietin-Like 4
FLJ11000	Hypothetical Protein Flj11000
CTSC	Cathepsin C
GUSB	Glucuronidase, Beta
CTSD	Cathepsin D (Lysosomal Aspartyl Peptidase)
MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)
CTSL	Cathepsin L
SEMA3G	Sema Domain, Immunoglobulin Domain (Ig), Short Basic Domain, Secreted, (Semaphorin) 3g
ERO1L	Ero1-Like (S. Cerevisiae)
HLA-DMB	Major Histocompatibility Complex, Class Ii, Dm Beta
GPC4	Glypican 4
LYZ	Lysozyme (Renal Amyloidosis)
IGSF21	Immunoglobin Superfamily, Member 21
CD83	Cd83 Antigen (Activated B Lymphocytes, Immunoglobulin Superfamily)
VSIG4	V-Set And Immunoglobulin Domain Containing 4
GPC1	Glypican 1
LGMN	Legumain
LDLR	Low Density Lipoprotein Receptor (Familial Hypercholesterolemia)
HSD11B1	Hydroxysteroid (11-Beta) Dehydrogenase 1
APOC1	Apolipoprotein C-I
FLJ22875	-
FCGR2B	Fc Fragment Of Igg, Low Affinity Iib, Receptor (Cd32)
NRP2	Neuropilin 2
THC2364841	-
CR593158	-
CSF1R	Colony Stimulating Factor 1 Receptor, Formerly Mcdonough Feline Sarcoma Viral (V-Fms) Oncogene Homolog
SCPEP1	Serine Carboxypeptidase 1
FUCA1	Fucosidase, Alpha-L- 1, Tissue
FCGR2A	Fc Fragment Of Igg, Low Affinity Iia, Receptor (Cd32)
IL10RA	Interleukin 10 Receptor, Alpha
PAPLN	Papilin, Proteoglycan-Like Sulfated Glycoprotein
ATP6AP1	Atpase, H+ Transporting, Lysosomal Accessory Protein 1
GAA	Glucosidase, Alpha; Acid (Pompe Disease, Glycogen Storage Disease Type Ii)
RTN4RL1	Reticulon 4 Receptor-Like 1
FCER1G	Fc Fragment Of Ige, High Affinity I, Receptor For; Gamma Polypeptide

PERP	Perp, Tp53 Apoptosis Effector
HLA-DPB1	Major Histocompatibility Complex, Class Ii, Dp Beta 1
PSAP	Prosaposin (Variant Gaucher Disease And Variant Metachromatic Leukodystrophy)
GALC	Galactosylceramidase
SLC39A8	Solute Carrier Family 39 (Zinc Transporter), Member 8
COLEC11	Collectin Sub-Family Member 11
THBS1	Thrombospondin 1
TNFRSF12A	Tumor Necrosis Factor Receptor Superfamily, Member 12a
FCGBP	Fc Fragment Of Igg Binding Protein
PRG1	Proteoglycan 1, Secretory Granule
EDN1	Endothelin 1
TGOLN2	Trans-Golgi Network Protein 2
AK024680	-
LY96	Lymphocyte Antigen 96
APLP2	Amyloid Beta (A4) Precursor-Like Protein 2
FOLR2	Folate Receptor 2 (Fetal)
FLJ22662	Hypothetical Protein Flj22662
MGC54289	-
MRC1L1	Mannose Receptor, C Type 1-Like 1
GP9	Glycoprotein Ix (Platelet)
C1QA	Complement Component 1, Q Subcomponent, A Chain
C1QB	Complement Component 1, Q Subcomponent, B Chain
LY86	Lymphocyte Antigen 86
CFHL1	Complement factor H-related 1
MERTK	C-Mer Proto-Oncogene Tyrosine Kinase
SDC4	Syndecan 4 (Amphiglycan, Ryudocan)
C7	Complement Component 7
SRPX2	Sushi-Repeat-Containing Protein, X-Linked 2
PTPNS1	Protein Tyrosine Phosphatase, Non-Receptor Type Substrate 1
SCARB2	Scavenger Receptor Class B, Member 2
CKLFSF3	CKLF-like MARVEL transmembrane domain containing 3
BMP6	Bone Morphogenetic Protein 6
GALNACT-2	Chondroitin Sulfate Galnact-2
LYPLA3	Lysophospholipase 3 (Lysosomal Phospholipase A2)
ADAM9	Adam Metallopeptidase Domain 9 (Meltrin Gamma)
SLITL2	Slit-Like 2 (Drosophila)
C2	Complement Component 2
STCH	Stress 70 Protein Chaperone, Microsome-Associated, 60kda
CTSZ	Cathepsin Z
SCUBE2	Signal Peptide, Cub Domain, Egf-Like 2
MR1	Major Histocompatibility Complex, Class I-Related

CYP1B1	Cytochrome P450, Family 1, Subfamily B, Polypeptide 1
LEPR	Leptin Receptor
MAN2B2	Mannosidase, Alpha, Class 2b, Member 2
BE926212	-
IL15	Interleukin 15
HTRA3	Htra Serine Peptidase 3
TMED9	Transmembrane Emp24 Protein Transport Domain Containing 9
SPFH1	Spfh Domain Family, Member 1
CMPK	Cytidylate Kinase
CYBRD1	Cytochrome B Reductase 1
CCL2	Chemokine (C-C Motif) Ligand 2
CREG1	Cellular Repressor Of E1a-Stimulated Genes 1
HLA-DMA	Major Histocompatibility Complex, Class Ii, Dm Alpha
LAMP1	Lysosomal-Associated Membrane Protein 1
BU732811	-
PPGB	Protective Protein For Beta-Galactosidase (Galactosialidosis)
C1QG	Complement component 1, q subcomponent, C chain
CD33	Cd33 Antigen (Gp67)
CASC4	Cancer Susceptibility Candidate 4
COL8A2	Collagen, Type Viii, Alpha 2
SEMA3B	Sema Domain, Immunoglobulin Domain (Ig), Short Basic Domain, Secreted, (Semaphorin) 3b
EXT1	Exostoses (Multiple) 1
SEMA3B	Sema Domain, Immunoglobulin Domain (Ig), Short Basic Domain, Secreted, (Semaphorin) 3b
A_24_P835388	-
SLC24A6	Solute Carrier Family 24 (Sodium/Potassium/Calcium Exchanger), Member 6
ATP6AP2	Atpase, H+ Transporting, Lysosomal Accessory Protein 2
NFE2L1	Nuclear Factor (Erythroid-Derived 2)-Like 1
PORIMIN	-
CYP26B1	Cytochrome P450, Family 26, Subfamily B, Polypeptide 1
MAN2A2	Mannosidase, Alpha, Class 2a, Member 2
TMEM32	Transmembrane Protein 32
CGREF1	Cell Growth Regulator With Ef-Hand Domain 1
MGAT1	Mannosyl (Alpha-1,3-)-Glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase
LUM	Lumican
TMCO3	Transmembrane And Coiled-Coil Domains 3
MEST	Mesoderm Specific Transcript Homolog (Mouse)
ASPN	Asporin (Lrr Class 1)
TGFBI	Transforming Growth Factor, Beta-Induced, 68kda
HLA-DPA1	Major Histocompatibility Complex, Class Ii, Dp Alpha 1
SLC43A3	Solute Carrier Family 43, Member 3

TMEM24	Transmembrane Protein 24
MPEG1	Macrophage Expressed Gene 1
CB049198	-
HLA-DOA	Major Histocompatibility Complex, Class Ii, Do Alpha
THBS2	Thrombospondin 2
ALOX5AP	Arachidonate 5-Lipoxygenase-Activating Protein
FAM3C	Family With Sequence Similarity 3, Member C
GLB1	Galactosidase, Beta 1
FAM14A	Family With Sequence Similarity 14, Member A
TMEM8	Transmembrane Protein 8 (Five Membrane-Spanning Domains)
UXS1	Udp-Glucuronate Decarboxylase 1
COL6A2	Collagen, Type Vi, Alpha 2
ST3GAL4	St3 Beta-Galactoside Alpha-2,3-Sialyltransferase 4
PDGFC	Spinal Cord-Derived Growth Factor; Secretory Growth Factor-Like Protein Fallotein
C2orf18	Chromosome 2 Open Reading Frame 18
COMTD1	Catechol-O-Methyltransferase Domain Containing 1
CYBB	Cytochrome B-245, Beta Polypeptide (Chronic Granulomatous Disease)
CHSY1	Carbohydrate (Chondroitin) Synthase 1
C11orf15	-
SFRP4	Secreted Frizzled-Related Protein 4
ENPP2	Ectonucleotide Pyrophosphatase/Phosphodiesterase 2 (Autotaxin)
CYP51A1	Cytochrome P450, Family 51, Subfamily A, Polypeptide 1
GPR34	G Protein-Coupled Receptor 34
SLC16A5	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 5
RCN1	Reticulocalbin 1, Ef-Hand Calcium Binding Domain
PCDH9	Protocadherin 9
M27126	-
AK098629	-
HLA-DQB1	Major Histocompatibility Complex, Class Ii, Dq Beta 1
LILRB2	Leukocyte Immunoglobulin-Like Receptor, Subfamily B (With Tm And Itim Domains), Member 2
TXNDC5	Thioredoxin Domain Containing 5
SRD5A2L	Steroid 5 Alpha-Reductase 2-Like
SLAMF9	Slam Family Member 9
TLR4	Toll-Like Receptor 4
APH1B	Anterior Pharynx Defective 1 Homolog B (C. Elegans)
ANPEP	Alanyl (Membrane) Aminopeptidase (Aminopeptidase N, Aminopeptidase M, Microsomal Aminopeptidase, Cd13, P150)
CFH	Complement Factor H
HLA-DRA	Major Histocompatibility Complex, Class Ii, Dr Alpha

Weight Stabilization ***Up Regulated Genes***

(WS)	
TF	Transferrin
FMOD	Fibromodulin
AQP1	Aquaporin 1 (Colton Blood Group)
ITGA6	Integrin, Alpha 6
THBS4	Thrombospondin 4
SLC16A7	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 7
TNN	Tenascin N
CXCL14	Chemokine (C-X-C Motif) Ligand 14
SVEP1	Sushi, Von Willebrand Factor Type A, Egf And Pentraxin Domain Containing 1
C20orf7	Chromosome 20 Open Reading Frame 7
COMP	Cartilage Oligomeric Matrix Protein
MMP15	Matrix Metallopeptidase 15 (Membrane-Inserted)
SAA4	Serum Amyloid A4, Constitutive
CSPG4	Chondroitin Sulfate Proteoglycan 4 (Melanoma-Associated)
GJA4	Gap Junction Protein, Alpha 4, 37kda (Connexin 37)
LRIG1	Leucine-Rich Repeats And Immunoglobulin-Like Domains 1
BC035751	-
LAMA5	Laminin, Alpha 5
PXMP2	Peroxisomal Membrane Protein 2, 22kda
BCKDHB	Branched Chain Keto Acid Dehydrogenase E1, Beta Polypeptide (Maple Syrup Urine Disease)
NID2	Nidogen 2 (Osteonidogen)
SFRP2	Secreted Frizzled-Related Protein 2
IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)
AGT	Angiotensinogen (Serpin Peptidase Inhibitor, Clade A, Member 8)
TFPI2	Tissue Factor Pathway Inhibitor 2
BENE	Mal, T-cell differentiation protein-like
ADAMTSL3	Adamts-Like 3
MOSC1	Moco Sulphurase C-Terminal Domain Containing 1
TSPAN3	Tetraspanin 3
EPHX2	Epoxide Hydrolase 2, Cytoplasmic
FLJ25530	Hepatocyte Cell Adhesion Molecule
CLEC14A	C-Type Lectin Domain Family 14, Member A
LOC400969	-
PODXL	Podocalyxin-Like
TSPAN18	Tetraspanin 18
HIG2	Hypoxia-Inducible Protein 2
AZGP1	Alpha-2-Glycoprotein 1, Zinc
FBLN5	Fibulin 5
LRRN6A	Leucine Rich Repeat Neuronal 6a

SERPINF1	Serpin Peptidase Inhibitor, Clade F (Alpha-2 Antiplasmin, Pigment Epithelium Derived Factor), Member 1
SCN4B	Sodium Channel, Voltage-Gated, Type Iv, Beta
IGSF4	Immunoglobulin Superfamily, Member 4
HP	Haptoglobin
PLAT	Plasminogen Activator, Tissue
NPDC1	Dkfzp586j0523 Protein
AZGP1	Alpha-2-Glycoprotein 1, Zinc
FXYD6	Fxyd Domain Containing Ion Transport Regulator 6
GCSH	Glycine Cleavage System Protein H (Aminomethyl Carrier)
PDGFD	Platelet Derived Growth Factor D
ACVR1C	Activin A Receptor, Type Ic
TMEPAI	Transmembrane, Prostate Androgen Induced Rna
GJA12	Gap Junction Protein, Alpha 12, 47kda
EMP1	Epithelial Membrane Protein 1
NMB	Neuromedin B
FLJ25530	Hepatocyte Cell Adhesion Molecule

Dietary Intervention (DI)	***Down Regulated Genes***
IGSF21	Immunoglobin Superfamily, Member 21
LOXL2	Lysyl Oxidase-Like 2
PPT1	Palmitoyl-Protein Thioesterase 1 (Ceroid-Lipofuscinosis, Neuronal 1, Infantile)
SCARB2	Scavenger Receptor Class B, Member 2
ASAH1	N-Acylsphingosine Amidohydrolase (Acid Ceramidase) 1
GPR34	G Protein-Coupled Receptor 34
SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)
TIMP1	Timp Metallopeptidase Inhibitor 1
HCST	Hematopoietic Cell Signal Transducer
MRC1L1	Mannose Receptor, C Type 1-Like 1
SFRP4	Secreted Frizzled-Related Protein 4
PSAP	Prosaposin (Variant Gaucher Disease And Variant Metachromatic Leukodystrophy)
VSIG4	V-Set And Immunoglobulin Domain Containing 4
CHI3L1	Chitinase 3-Like 1 (Cartilage Glycoprotein-39)
CTSZ	Cathepsin Z
C1QB	Complement Component 1, Q Subcomponent, B Chain
SLAMF8	Slam Family Member 8
CD248	Cd248 Antigen, Endosialin
ITGB5	Integrin, Beta 5
PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor Acetylhydrolase, Plasma)
GLB1	Galactosidase, Beta 1

FCGBP	Fc Fragment Of Igg Binding Protein
CD52	Cd52 Antigen (Campath-1 Antigen)
LGMN	Legumain
IFI30	Interferon, Gamma-Inducible Protein 30
GLIPR1	Gli Pathogenesis-Related 1 (Glioma)
MFAP5	Microfibrillar Associated Protein 5
PPGB	Protective Protein For Beta-Galactosidase (Galactosialidosis)
EMP3	Epithelial Membrane Protein 3
LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)
CTSB	Cathepsin B
RPN2	Ribophorin Ii
DKFZP586H2123	Regeneration Associated Muscle Protease
C1QG	Complement component 1, q subcomponent, C chain
EMILIN2	Elastin Microfibril Interfacer 2
LOC389033	Hypothetical Loc389033
STAB1	Stabilin 1
CSF1R	Colony Stimulating Factor 1 Receptor, Formerly Mcdonough Feline Sarcoma Viral (V-Fms) Oncogene Homolog
TNFRSF12A	Tumor Necrosis Factor Receptor Superfamily, Member 12a
LHFPL2	Lipoma Hmgic Fusion Partner-Like 2
FCGR2B	Fc Fragment Of Igg, Low Affinity Iib, Receptor (Cd32)
ITGAM	Integrin, Alpha M (Complement Component 3 Receptor 3 Subunit)
ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)
FOLR2	Folate Receptor 2 (Fetal)
MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)
HAVCR2	Hepatitis A Virus Cellular Receptor 2
RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1
TGFBI	Transforming Growth Factor, Beta-Induced, 68kda
C2	Complement Component 2
MXRA5	Matrix-Remodelling Associated 5
LILRB5	Leukocyte Immunoglobulin-Like Receptor, Subfamily B (With Tm And Itim Domains), Member 5
CREG1	Cellular Repressor Of E1a-Stimulated Genes 1
CSPG2	Chondroitin Sulfate Proteoglycan 2 (Versican)
A_24_P835388	-
AGPAT3	1-Acylglycerol-3-Phosphate O-Acyltransferase 3
GGH	Gamma-Glutamyl Hydrolase (Conjugase, Folylpolygammaglutamyl Hydrolase)
LY86	Lymphocyte Antigen 86
IL10RA	Interleukin 10 Receptor, Alpha
SRD5A2L	Steroid 5 Alpha-Reductase 2-Like
ADAM12	Adam Metallopeptidase Domain 12 (Meltrin Alpha)

FN1	Fibronectin 1
CTSC	Cathepsin C
TMCO3	Transmembrane And Coiled-Coil Domains 3
CPVL	Carboxypeptidase, Vitellogenic-Like
CR593158	-
HLA-DMA	Major Histocompatibility Complex, Class Ii, Dm Alpha
CCL2	Chemokine (C-C Motif) Ligand 2
CCL13	Chemokine (C-C Motif) Ligand 13
SLC31A2	Solute Carrier Family 31 (Copper Transporters), Member 2
IL1R1	Interleukin 1 Receptor, Type I
FCER1G	Fc Fragment Of Ige, High Affinity I, Receptor For; Gamma Polypeptide
LOC202459	Similar To Riken Cdna 2310008m10
COL5A2	Collagen, Type V, Alpha 2
PTAFR	Platelet-Activating Factor Receptor
CXCL9	Chemokine (C-X-C Motif) Ligand 9
RNASE1	Ribonuclease, Rnase A Family, 1 (Pancreatic)
LDLR	Low Density Lipoprotein Receptor (Familial Hypercholesterolemia)
CTSS	Cathepsin S
CD33	Cd33 Antigen (Gp67)
HSPC196	Hypothetical Protein Hspc196
GPC1	Glypican 1
HLA-DPB1	Major Histocompatibility Complex, Class Ii, Dp Beta 1
FLJ22875	-
THC2364841	-
CD9	Cd9 Antigen (P24)
CD53	Cd53 Antigen
HLA-DMB	Major Histocompatibility Complex, Class Ii, Dm Beta
FUCA1	Fucosidase, Alpha-L- 1, Tissue
COLEC11	Collectin Sub-Family Member 11
ATP6V0B	Atpase, H+ Transporting, Lysosomal 21kda, V0 Subunit B
NOMO1	Nodal Modulator 1
NPC2	Niemann-Pick Disease, Type C2
SLC39A14	Solute Carrier Family 39 (Zinc Transporter), Member 14
APH1B	Anterior Pharynx Defective 1 Homolog B (C. Elegans)
LOX	Lysyl Oxidase
CD47	Cd47 Antigen (Rh-Related Antigen, Integrin-Associated Signal Transducer)
PLTP	Phospholipid Transfer Protein
LACE1	Lactation Elevated-1
RNASET2	Ribonuclease T2
TMED5	Transmembrane Emp24 Protein Transport Domain Containing 5
IMPA3	cDNA FLJ33669 fis, clone BRAMY2028740

SPINT2	Serine Peptidase Inhibitor, Kunitz Type, 2
A_23_P170719	-
C1QA	Complement Component 1, Q Subcomponent, A Chain
MPEG1	Macrophage Expressed Gene 1
SVH	Svh Protein
GDF15	Growth Differentiation Factor 15
P4HB	Procollagen-Proline, 2-Oxoglutarate 4-Dioxygenase (Proline 4-Hydroxylase), Beta Polypeptide
SPCS3	Signal Peptidase Complex Subunit 3 Homolog (S. Cerevisiae)
DNASE2	Deoxyribonuclease Ii, Lysosomal
BE926212	-
DHCR24	24-Dehydrocholesterol Reductase
ANGPTL4	Angiopoietin-Like 4
IMPA3	cDNA FLJ33669 fis, clone BRAMY2028740
TPARL	Tpa Regulated Locus
GP9	Glycoprotein Ix (Platelet)
CD97	Cd97 Antigen
HLA-DQB1	Major Histocompatibility Complex, Class Ii, Dq Beta 1
ADAM9	Adam Metallopeptidase Domain 9 (Meltrin Gamma)
C1orf85	Chromosome 1 Open Reading Frame 85
RDH5	Retinol Dehydrogenase 5 (11-Cis And 9-Cis)
HLA-DPA1	Major Histocompatibility Complex, Class Ii, Dp Alpha 1
HSD11B1	Hydroxysteroid (11-Beta) Dehydrogenase 1
THC2280549	-
LILRA6	Leukocyte Immunoglobulin-Like Receptor, Subfamily A (With Tm Domain), Member 6
FCGR2A	Fc Fragment Of Igg, Low Affinity Iia, Receptor (Cd32)
AK024680	-
IL10RB	Interleukin 10 Receptor, Beta
ITGAV	Integrin, Alpha V (Vitronectin Receptor, Alpha Polypeptide, Antigen Cd51)
MGAT4A	Mannosyl (Alpha-1,3-)-Glycoprotein Beta-1,4-N-Acetylglucosaminyltransferase, Isozyme A
MRPL14	Mitochondrial Ribosomal Protein L14
CYBASC3	Cytochrome B, Ascorbate Dependent 3
IL4I1	Interleukin 4 Induced 1
ATP6AP1	Atpase, H+ Transporting, Lysosomal Accessory Protein 1
GK001	Coiled-coil domain containing 47
MGAT1	Mannosyl (Alpha-1,3-)-Glycoprotein Beta-1,2-N-Acetylglucosaminyltransferase
CYP1B1	Cytochrome P450, Family 1, Subfamily B, Polypeptide 1
PIGK	Phosphatidylinositol Glycan, Class K
ATP6AP2	Atpase, H+ Transporting, Lysosomal Accessory Protein 2
CD83	Cd83 Antigen (Activated B Lymphocytes, Immunoglobulin Superfamily)

COL5A1	Collagen, Type V, Alpha 1
HLA-DQA2	Major Histocompatibility Complex, Class Ii, Dq Alpha 1
M6PR	Mannose-6-Phosphate Receptor (Cation Dependent)
SRPX2	Sushi-Repeat-Containing Protein, X-Linked 2
C2orf7	Chromosome 2 Open Reading Frame 7
PIGF	Phosphatidylinositol Glycan, Class F
KSP37	Ksp37 Protein
BST1	Bone Marrow Stromal Cell Antigen 1
PLAU	Plasminogen Activator, Urokinase
TMP21	Transmembrane emp24-like trafficking protein 10 (yeast)
LAIR1	Leukocyte-Associated Ig-Like Receptor 1

Dietary Intervention (DI)	Up Regulated Genes
HIG2	Hypoxia-Inducible Protein 2
TF	Transferrin
ANG	Angiogenin, Ribonuclease, Rnase A Family, 5
TF	Transferrin
FIGF	C-Fos Induced Growth Factor (Vascular Endothelial Growth Factor D)
LGI4	Leucine-Rich Repeat Lgi Family, Member 4
TNN	Tenascin N
LRIG1	Leucine-Rich Repeats And Immunoglobulin-Like Domains 1
AZGP1	Alpha-2-Glycoprotein 1, Zinc

Supplementary Table A5: List of genes predictors of insulin sensitivity in each dietary phase using partial least squares-regression (PLS-R) analysis

Order	Gene Symbol	Gene Name	Secretion	VIP
		Energy Restriction (ER) : R^2x=89% R^2y=100% Q^2%=91% R^2%=100%		
1	FADS2	Fatty Acid Desaturase 2	-	4.194
2	SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	-	3.984
3	HP	Haptoglobin	Yes	3.702
4	LOC55908	Hepatocellular Carcinoma-Associated Gene Td26	-	2.653
5	FADS1	Fatty Acid Desaturase 1	-	2.638
6	APOC1	Apolipoprotein C-I	Yes	2.606
7	THBS4	Thrombospondin 4	Yes	2.579
8	COMP	Cartilage Oligomeric Matrix Protein	Yes	2.425
9	SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	Yes	2.306
10	DGAT2	Diacylglycerol O-Acyltransferase Homolog 2 (Mouse)	-	1.963
11	EDN1	Endothelin 1	Yes	1.917
12	ALDOC	Aldolase C, Fructose-Bisphosphate	-	1.857
13	ACP5	Acid Phosphatase 5, Tartrate Resistant	Yes	1.792
14	GPX3	Glutathione Peroxidase 3 (Plasma)	Yes	1.786
15	MXRA5	Matrix-Remodelling Associated 5	Yes	1.778
16	FCGBP	Fc Fragment Of Igg Binding Protein	Yes	1.770
17	S100A8	S100 Calcium Binding Protein A8 (Calgranulin A)	-	1.762
18	SFRP2	Secreted Frizzled-Related Protein 2	Yes	1.740
19	PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor Acetylhydrolase, Plasma)	Yes	1.697
20	FMOD	Fibromodulin	Yes	1.647
21	A_32_P133926	-	-	1.628
22	CIDEA	Cell Death-Inducing Dffa-Like Effector A	-	1.546
23	SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	-	1.545
24	TK1	Thymidine Kinase 1, Soluble	-	1.517
25	AACS	Acetoacetyl-Coa Synthetase	-	1.509
26	FHL1	Four And A Half Lim Domains 1	-	1.484
27	LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)	Yes	1.483
28	CD52	Cd52 Antigen (Campath-1 Antigen)	Yes	1.463
29	IFI30	Interferon, Gamma-Inducible Protein 30	Yes	1.431
30	EPB41L4B	Erythrocyte Membrane Protein Band 4.1 Like 4b	-	1.425
31	ELOVL5	Elovl Family Member 5, Elongation Of Long Chain Fatty Acids (Fen1/Elo2, Sur4/Elo3-Like, Yeast)	-	1.383
32	SPOCD1	Spoc Domain Containing 1	-	1.372
33	LGALS12	Lectin, Galactoside-Binding, Soluble, 12 (Galectin 12)	-	1.372
34	AADACL1	Arylacetamide Deacetylase-Like 1	-	1.352
35	TNC	Tenascin C (Hexabrachion)	Yes	1.338

36	ECHDC1	Enoyl Coenzyme A Hydratase Domain Containing 1	-	1.333
37	MME	Membrane Metallo-Endopeptidase (Neutral Endopeptidase, Enkephalinase, Calla, Cd10)	-	1.333
38	PHGDH	Phosphoglycerate Dehydrogenase	-	1.331
39	EGR1	Early Growth Response 1	-	1.303
40	GDF15	Growth Differentiation Factor 15	Yes	1.295
41	NMB	Neuromedin B	Yes	1.290
42	CES1	Carboxylesterase 1 (Monocyte/Macrophage Serine Esterase 1)	-	1.288
43	TUBB3	Melanocortin 1 Receptor (Alpha Melanocyte Stimulating Hormone Receptor)	-	1.279
44	A_24_P212314	-	-	1.268
45	CCR1	Chemokine (C-C Motif) Receptor 1	-	1.226
46	ADH1A	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.226
47	ADH1C	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.204
48	TUBB8	Tubulin, Beta 8	-	1.204
49	TUBB6	Tubulin, Beta 6	-	1.197
50	C20orf7	Chromosome 20 Open Reading Frame 7	Yes	1.187
51	FGR	Gardner-Rasheed Feline Sarcoma Viral (V-Fgr) Oncogene Homolog	-	1.183
52	ACSL1	Fatty-Acid-Coenzyme A Ligase, Long-Chain 1	-	1.181
53	LOC92162	-	-	1.180
54	RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1	Yes	1.179
55	TUBB2	-	-	1.154
56	SAA4	Serum Amyloid A4, Constitutive	Yes	1.147
57	SELENBP1	Selenium Binding Protein 1	-	1.133
58	DHCR24	24-Dehydrocholesterol Reductase	Yes	1.119
59	ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)	Yes	1.108
60	GPAM	Glycerol-3-Phosphate Acyltransferase, Mitochondrial	-	1.106
61	ABCC6	Atp-Binding Cassette, Sub-Family C (Cftr/Mrp), Member 6	-	1.103
62	PDXK	Pyridoxal (Pyridoxine, Vitamin B6) Kinase	-	1.098
63	SERTAD4	Serta Domain Containing 4	-	1.089
64	HMOX1	Heme Oxygenase (Decycling) 1	-	1.086
65	MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)	Yes	1.083
66	TFPI2	Tissue Factor Pathway Inhibitor 2	Yes	1.079
67	MARCO	Macrophage Receptor With Collagenous Structure	-	1.072
68	LAMB3	Laminin, Beta 3	Yes	1.055
69	BMP6	Bone Morphogenetic Protein 6	Yes	1.053
70	AQP1	Aquaporin 1 (Colton Blood Group)	Yes	1.049
71	H19	H19, Imprinted Maternally Expressed Untranslated Mrna	-	1.049
72	ADH1B	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.044
73	S100B	S100 Calcium Binding Protein, Beta (Neural)	-	1.032
74	BZRP	Benzodiazapine Receptor (Peripheral)	-	1.024
75	LOC152831	-	-	1.021

76	ATP1B1	Atpase, Na+/K+ Transporting, Beta 1 Polypeptide	-	1.019
77	BC018597	-	-	1.015
78	THRSP	Thyroid Hormone Responsive (Spot14 Homolog, Rat)	-	1.012
79	HTRA3	Htra Serine Peptidase 3	Yes	1.008
		Weight Stabilization (WS) : R^2x=90% R^2y=97% Q^2%=75% R^2%=100%		
1	S100A8	S100 Calcium Binding Protein A8 (Calgranulin A)	-	5.245
2	SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	Yes	2.959
3	ACP5	Acid Phosphatase 5, Tartrate Resistant	Yes	2.428
4	THBS4	Thrombospondin 4	Yes	2.349
5	HP	Haptoglobin	Yes	2.286
6	MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)	Yes	2.222
7	UCHL1	Ubiquitin Carboxyl-Terminal Esterase L1 (Ubiquitin Thiolesterase)	-	2.162
8	FCGBP	Fc Fragment Of Igg Binding Protein	Yes	2.142
9	CHI3L1	Chitinase 3-Like 1 (Cartilage Glycoprotein-39)	Yes	2.088
10	FPR1	Formyl Peptide Receptor 1	-	2.076
11	PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor Acetylhydrolase, Plasma)	Yes	2.029
12	CD52	Cd52 Antigen (Campath-1 Antigen)	Yes	1.935
13	IFI30	Interferon, Gamma-Inducible Protein 30	Yes	1.898
14	EGR1	Early Growth Response 1	-	1.754
15	SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	-	1.753
16	LOC55908	Hepatocellular Carcinoma-Associated Gene Td26	-	1.736
17	FADS2	Fatty Acid Desaturase 2	-	1.700
18	LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)	Yes	1.692
19	TNFRSF12A	Tumor Necrosis Factor Receptor Superfamily, Member 12a	Yes	1.597
20	HTRA3	Htra Serine Peptidase 3	Yes	1.589
21	AADACL1	Arylacetamide Deacetylase-Like 1	-	1.582
22	ACSL1	Fatty-Acid-Coenzyme A Ligase, Long-Chain 1	-	1.569
23	DGAT2	Diacylglycerol O-Acyltransferase Homolog 2 (Mouse)	-	1.514
24	WBSCR14	Williams Beuren syndrome chromosome region 14, MLX interacting protein-like, carbohydrate-responsive element-binding protein	-	1.511
25	GDF15	Growth Differentiation Factor 15	Yes	1.510
26	ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)	Yes	1.449
27	COMP	Cartilage Oligomeric Matrix Protein	Yes	1.437
28	CCR1	Chemokine (C-C Motif) Receptor 1	-	1.399
29	MRC1L1	Mannose Receptor, C Type 1-Like 1	Yes	1.398
30	APOC1	Apolipoprotein C-I	Yes	1.382
31	MS4A4A	Membrane-Spanning 4-Domains, Subfamily A, Member 4	-	1.377
32	CD163	Cd163 Antigen	-	1.349
33	SFRS5	Splicing Factor, Arginine/Serine-Rich 5	-	1.347

34	ZNF406	Zinc Finger Protein 406	-	1.342
35	CTSS	Cathepsin S	Yes	1.338
36	FBP1	Fructose-1,6-Bisphosphatase 1	-	1.337
37	CCL13	Chemokine (C-C Motif) Ligand 13	Yes	1.321
38	H19	H19, Imprinted Maternally Expressed Untranslated Mrna	-	1.310
39	SLC31A2	Solute Carrier Family 31 (Copper Transporters), Member 2	Yes	1.307
40	RARRES1	Retinoic Acid Receptor Responder (Tazarotene Induced) 1	Yes	1.294
41	PHGDH	Phosphoglycerate Dehydrogenase	-	1.293
42	ELOVL5	Elovl Family Member 5, Elongation Of Long Chain Fatty Acids (Fen1/Elo2, Sur4/Elo3-Like, Yeast)	-	1.286
43	SPOCD1	Spoc Domain Containing 1	-	1.285
44	C20orf7	Chromosome 20 Open Reading Frame 7	Yes	1.273
45	TF	Transferrin	Yes	1.270
46	GPX3	Glutathione Peroxidase 3 (Plasma)	Yes	1.258
47	TMEPAI	Transmembrane, Prostate Androgen Induced Rna	Yes	1.231
48	CCL2	Chemokine (C-C Motif) Ligand 2	Yes	1.225
49	LCP1	Lymphocyte Cytosolic Protein 1 (L-Plastin)	-	1.223
50	CD68	Cd68 Antigen	Yes	1.220
51	MIG-6	-	-	1.218
52	LOC387911	Similar To Hypothetical Protein Mgc48915	-	1.217
53	TK1	Thymidine Kinase 1, Soluble	-	1.186
54	HMOX1	Heme Oxygenase (Decycling) 1	-	1.178
55	ADPN	Adiponutrin	-	1.172
56	CKMT2	Creatine Kinase, Mitochondrial 2 (Sarcomeric)	Yes	1.164
57	MSR1	Macrophage Scavenger Receptor 1	-	1.163
58	HCST	Hematopoietic Cell Signal Transducer	Yes	1.153
59	TYROBP	Tyro Protein Tyrosine Kinase Binding Protein	Yes	1.151
60	SLC25A10	Solute Carrier Family 25 (Mitochondrial Carrier; Dicarboxylate Transporter), Member 10	-	1.151
61	S100B	S100 Calcium Binding Protein, Beta (Neural)	-	1.149
62	IGF1	Insulin-Like Growth Factor 1 (Somatomedin C)	Yes	1.130
63	SLA	Src-Like-Adaptor	-	1.128
64	EMILIN2	Elastin Microfibril Interfacer 2	Yes	1.127
65	CDKN2C	Cyclin-Dependent Kinase Inhibitor 2c (P18, Inhibits Cdk4)	-	1.126
66	FMOD	Fibromodulin	Yes	1.126
67	TFPI2	Tissue Factor Pathway Inhibitor 2	Yes	1.124
68	MRAP	Melanocortin 2 Receptor Accessory Protein	-	1.121
69	SOCS3	Suppressor Of Cytokine Signaling 3	-	1.119
70	TNN	Tenascin N	Yes	1.117
71	CDKN1C	Cyclin-Dependent Kinase Inhibitor 1c (P57, Kip2)	-	1.116
72	AKR1C3	Aldo-Keto Reductase Family 1, Member C3 (3-Alpha Hydroxysteroid Dehydrogenase, Type Ii)	-	1.111
73	BQ049338	-	-	1.107

74	HIST2H2AA	Histone 2, H2aa	-	1.096
75	C1QB	Complement Component 1, Q Subcomponent, B Chain	Yes	1.093
76	DUSP6	Dual Specificity Phosphatase 6	-	1.092
77	TUBB8	Tubulin, Beta 8	-	1.091
78	KSP37	Ksp37 Protein	Yes	1.087
79	C22orf16	Chromosome 22 Open Reading Frame 16	-	1.085
80	SAA4	Serum Amyloid A4, Constitutive	Yes	1.073
81	ATP1B1	Atpase, Na+/K+ Transporting, Beta 1 Polypeptide	-	1.071
82	NMB	Neuromedin B	Yes	1.063
83	S100A10	S100 Calcium Binding Protein A10 (Annexin Ii Ligand, Calpactin I, Light Polypeptide (P11))	-	1.061
84	FHL1	Four And A Half Lim Domains 1	-	1.061
85	VSIG4	V-Set And Immunoglobulin Domain Containing 4	Yes	1.058
86	SREBF1	Sterol Regulatory Element Binding Transcription Factor 1	-	1.057
87	FUCA1	Fucosidase, Alpha-L- 1, Tissue	Yes	1.053
88	HSPA12A	Heat Shock Protein 12a	Yes	1.052
89	PLAT	Plasminogen Activator, Tissue	Yes	1.052
90	LDLR	Low Density Lipoprotein Receptor (Familial Hypercholesterolemia)	Yes	1.043
91	ANGPTL4	Angiopoietin-Like 4	Yes	1.042
92	MXRA5	Matrix-Remodelling Associated 5	Yes	1.041
93	LILRB5	Leukocyte Immunoglobulin-Like Receptor, Subfamily B (With Tm And Itim Domains), Member 5	Yes	1.036
94	SLAMF8	Slam Family Member 8	Yes	1.034
95	C8orf34	Chromosome 8 Open Reading Frame 34	-	1.033
96	SCN4B	Sodium Channel, Voltage-Gated, Type Iv, Beta	Yes	1.031
97	CAPG	Capping Protein (Actin Filament), Gelsolin-Like	-	1.031
98	QDPR	Quinoid Dihydropteridine Reductase	-	1.029
99	ICAM3	Intercellular Adhesion Molecule 3	Yes	1.029
100	A_23_P170719	-	Yes	1.028
101	ADH1C	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.014
102	SLCO2B1	Solute Carrier Organic Anion Transporter Family, Member 2b1	-	1.007
103	PEMT	Phosphatidylethanolamine N-Methyltransferase	-	1.001
		Dietary Intervention (DI) : R^2x=88% R^2y=99% Q^2%=92% R^2%=97%		
1	S100A8	S100 Calcium Binding Protein A8 (Calgranulin A)	-	4.727
2	MMP9	Matrix Metallopeptidase 9 (Gelatinase B, 92kda Gelatinase, 92kda Type Iv Collagenase)	Yes	3.414
3	SPP1	Secreted Phosphoprotein 1 (Osteopontin, Bone Sialoprotein I, Early T-Lymphocyte Activation 1)	Yes	3.267
4	IFI30	Interferon, Gamma-Inducible Protein 30	Yes	2.262
5	CD52	Cd52 Antigen (Campath-1 Antigen)	Yes	2.243
6	PLA2G7	Phospholipase A2, Group Vii (Platelet-Activating Factor Acetylhydrolase, Plasma)	Yes	2.172
7	FPR1	Formyl Peptide Receptor 1	-	2.038

8	GDF15	Growth Differentiation Factor 15	Yes	1.969
9	HMOX1	Heme Oxygenase (Decycling) 1	-	1.964
10	ACP5	Acid Phosphatase 5, Tartrate Resistant	Yes	1.962
11	FCGBP	Fc Fragment Of Igg Binding Protein	Yes	1.861
12	ITGB2	Integrin, Beta 2 (Complement Component 3 Receptor 3 And 4 Subunit)	Yes	1.850
13	MARCO	Macrophage Receptor With Collagenous Structure	-	1.845
14	AK022045	-	-	1.808
15	LIPA	Lipase A, Lysosomal Acid, Cholesterol Esterase (Wolman Disease)	Yes	1.723
16	AADACL1	Arylacetamide Deacetylase-Like 1	-	1.715
17	FADS2	Fatty Acid Desaturase 2	-	1.663
18	CHI3L1	Chitinase 3-Like 1 (Cartilage Glycoprotein-39)	Yes	1.636
19	HP	Haptoglobin	Yes	1.610
20	LOC55908	Hepatocellular Carcinoma-Associated Gene Td26	-	1.604
21	F13A1	Coagulation Factor Xiii, A1 Polypeptide	-	1.582
22	LCP1	Lymphocyte Cytosolic Protein 1 (L-Plastin)	-	1.577
23	CD163	Cd163 Antigen	-	1.571
24	CCR1	Chemokine (C-C Motif) Receptor 1	-	1.488
25	FGR	Gardner-Rasheed Feline Sarcoma Viral (V-Fgr) Oncogene Homolog	-	1.482
26	VSIG4	V-Set And Immunoglobulin Domain Containing 4	Yes	1.477
27	ALOX5AP	Arachidonate 5-Lipoxygenase-Activating Protein	Yes	1.459
28	SLC16A3	Solute Carrier Family 16 (Monocarboxylic Acid Transporters), Member 3	-	1.444
29	CCL13	Chemokine (C-C Motif) Ligand 13	Yes	1.431
30	C1QB	Complement Component 1, Q Subcomponent, B Chain	Yes	1.431
31	CDKN1C	Cyclin-Dependent Kinase Inhibitor 1c (P57, Kip2)	-	1.421
32	MXRA5	Matrix-Remodelling Associated 5	Yes	1.418
33	NPL	N-Acetylneuraminate Pyruvate Lyase (Dihydrodipicolinate Synthase)	-	1.414
34	TK1	Thymidine Kinase 1, Soluble	-	1.414
35	HAVCR2	Hepatitis A Virus Cellular Receptor 2	Yes	1.376
36	FCN1	Ficolin (Collagen/Fibrinogen Domain Containing) 1	Yes	1.373
37	S100A4	S100 Calcium Binding Protein A4 (Calcium Protein, Calvasculin, Metastasin, Murine Placental Homolog)	-	1.366
38	MS4A4A	Membrane-Spanning 4-Domains, Subfamily A, Member 4	-	1.365
39	SLAMF8	Slam Family Member 8	Yes	1.359
40	DHRS9	Dehydrogenase/Reductase (Sdr Family) Member 9	Yes	1.345
41	BCAT1	Branched Chain Aminotransferase 1, Cytosolic	-	1.345
42	CD14	Cd14 Antigen	Yes	1.340
43	SCD	Stearoyl-Coa Desaturase (Delta-9-Desaturase)	-	1.334
44	MSR1	Macrophage Scavenger Receptor 1	-	1.334
45	AK022044	-	-	1.333
46	EMILIN2	Elastin Microfibril Interfacer 2	Yes	1.326
47	CD68	Cd68 Antigen	Yes	1.325

48	ATF3	Activating Transcription Factor 3	-	1.316
49	CTSS	Cathepsin S	Yes	1.316
50	SFRP4	Secreted Frizzled-Related Protein 4	Yes	1.297
51	FADS1	Fatty Acid Desaturase 1	-	1.290
52	ZBTB20	Zinc Finger And Btb Domain Containing 20	-	1.289
53	MS4A7	Membrane-Spanning 4-Domains, Subfamily A, Member 7	-	1.288
54	IL4I1	Interleukin 4 Induced 1	Yes	1.287
55	C1QA	Complement Component 1, Q Subcomponent, A Chain	Yes	1.286
56	KIAA0485	Kiaa0485 Protein	-	1.285
57	TYROBP	Tyro Protein Tyrosine Kinase Binding Protein	Yes	1.274
58	UCHL1	Ubiquitin Carboxyl-Terminal Esterase L1 (Ubiquitin Thiolesterase)	-	1.272
59	IGSF21	Immunoglobin Superfamily, Member 21	Yes	1.272
60	CES1	Carboxylesterase 1 (Monocyte/Macrophage Serine Esterase 1)	-	1.271
61	LAPTM5	Lysosomal Associated Multispanning Membrane Protein 5	-	1.235
62	CKMT2	Creatine Kinase, Mitochondrial 2 (Sarcomeric)	Yes	1.226
63	THC2389705	-	-	1.222
64	AIF1	Allograft Inflammatory Factor 1	-	1.222
65	APOC1	Apolipoprotein C-I	Yes	1.215
66	ITGAX	Integrin, Alpha X (Complement Component 3 Receptor 4 Subunit)	Yes	1.213
67	LOC440234	-	-	1.203
68	SLA	Src-Like-Adaptor	-	1.199
69	WBSCR14	Williams Beuren syndrome chromosome region 14, MLX interacting protein-like, carbohydrate-responsive element-binding protein	-	1.195
70	CTSB	Cathepsin B	Yes	1.194
71	C1orf38	Chromosome 1 Open Reading Frame 38	-	1.190
72	SPOCD1	Spoc Domain Containing 1	-	1.186
73	ADH1B	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.181
74	CSF1R	Colony Stimulating Factor 1 Receptor, Formerly Mcdonough Feline Sarcoma Viral (V-Fms) Oncogene Homolog	Yes	1.179
75	HCST	Hematopoietic Cell Signal Transducer	Yes	1.178
76	LYZ	Lysozyme (Renal Amyloidosis)	Yes	1.173
77	SLCO2B1	Solute Carrier Organic Anion Transporter Family, Member 2b1	-	1.172
78	TFRC	Transferrin Receptor (P90, Cd71)	-	1.161
79	RGS10	Regulator Of G-Protein Signalling 10	-	1.159
80	ATP1B1	Atpase, Na+/K+ Transporting, Beta 1 Polypeptide	-	1.159
81	RAC2	Ras-Related C3 Botulinum Toxin Substrate 2 (Rho Family, Small Gtp Binding Protein Rac2)	-	1.150
82	C19orf28	Hypothetical Protein Pp3501	-	1.150
83	CXCR4	Chemokine (C-X-C Motif) Receptor 4	-	1.144
84	KYNU	Kynureninase (L-Kynurenine Hydrolase)	-	1.144
85	ADH1C	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.142
86	VAMP8	Vesicle-Associated Membrane Protein 8 (Endobrevin)	-	1.138
87	FCGR2B	Fc Fragment Of Igg, Low Affinity Iib, Receptor (Cd32)	Yes	1.124

88	WDFY4	Wdfy Family Member 4	-	1.122
89	URP2	Unc-112 Related Protein 2	-	1.120
90	CIRBP	Cold Inducible Rna Binding Protein	-	1.120
91	FBP1	Fructose-1,6-Bisphosphatase 1	-	1.110
92	CCL2	Chemokine (C-C Motif) Ligand 2	Yes	1.108
93	SLC31A2	Solute Carrier Family 31 (Copper Transporters), Member 2	Yes	1.105
94	BQ049338	-	-	1.093
95	TIGA1	Tiga1	-	1.092
96	TNC	Tenascin C (Hexabrachion)	Yes	1.091
97	LILRB5	Leukocyte Immunoglobulin-Like Receptor, Subfamily B (With Tm And Itim Domains), Member 5	Yes	1.091
98	ADH1A	Alcohol Dehydrogenase 1a (Class I), Alpha Polypeptide	-	1.081
99	BC016022	-	-	1.077
100	MRC1L1	Mannose Receptor, C Type 1-Like 1	Yes	1.077
101	A_24_P835388	-	Yes	1.074
102	ASAH1	N-Acylsphingosine Amidohydrolase (Acid Ceramidase) 1	Yes	1.065
103	CD53	Cd53 Antigen	Yes	1.060
104	FOLR2	Folate Receptor 2 (Fetal)	Yes	1.058
105	TUBB6	Tubulin, Beta 6	-	1.058
106	CYBB	Cytochrome B-245, Beta Polypeptide (Chronic Granulomatous Disease)	Yes	1.047
107	ARPC1B	Actin Related Protein 2/3 Complex, Subunit 1b, 41kda	-	1.046
108	TGFBI	Transforming Growth Factor, Beta-Induced, 68kda	Yes	1.043
109	ENST00000262795	-	-	1.030
110	GLUL	Glutamate-Ammonia Ligase (Glutamine Synthetase)	-	1.024
111	XLKD1	Extracellular Link Domain Containing 1	Yes	1.019
112	CD83	Cd83 Antigen (Activated B Lymphocytes, Immunoglobulin Superfamily)	Yes	1.012
113	C1QG	-	Yes	1.011
114	SFRS5	Splicing Factor, Arginine/Serine-Rich 5	-	1.011

The PLS-R method has been developed for constructing predictive models which maximizes the covariance between the predictor space (gene expression, X) and the response space (insulin sensitivity, Y). A principal component analysis of the set of X variables is carried out in order to predict the Y variable. The optimal number of component is determined by cross validation and a normalized total error of prediction (cross-validation parameter Q^2) is computed. Q^2 serves as a predictive measure for the full model and is used to select optimal number of PLS-R components. Other statistics are calculated from the model. The importance of variation in X matrix and Y variables is explained by the factors R^2X and R^2Y respectively (fraction of the sums of squares of X and Y values). The variable importance for projection (VIP) represents the value of each predictor in fitting the PLS-R model for both predictors and response. A value above 1 is considered to high. R^2 is the correlation coefficient between Y and each PLS-R component of the PLS-R model.

Supplementary Table A6: List of differentially expressed genes related to metabolism during energy restriction

Gene symbol	Gene name	Pathway	Cell specificity
ACADM	Acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight chain	Mitochondrial fatty acid beta-oxidation	Adipocyte
ACO2	Aconitase 2, mitochondrial	Citrate cycle (TCA cycle)	Adipocyte
ACOX1	Acyl-Coenzyme A oxidase 1, palmitoyl	Mitochondrial fatty acid beta-oxidation	Adipocyte
ACSL1	Acyl-CoA synthetase long-chain family member 1	Mitochondrial fatty acid beta-oxidation	Adipocyte
ACSL3	Acyl-CoA synthetase long-chain family member 3	Mitochondrial fatty acid beta-oxidation	Adipocyte
ACYP2	Acylphosphatase 2, muscle type	Glycolysis	Adipocyte
ADPN	adiponutrin (PNPLA3)	Triacylglycerol synthesis	Adipocyte
AGPAT3	1-acylglycerol-3-phosphate O-acyltransferase 3	Triacylglycerol synthesis	Adipocyte
ALDOC	Aldolase C, fructose-bisphosphate	Glycolysis	Adipocyte
ATP5A1	ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle	Oxidative phosphorylation	Adipocyte
ATP5B	ATP synthase, H+ transporting, mitochondrial F1 complex, beta polypeptide	Oxidative phosphorylation	Adipocyte
ATP5C1	ATP synthase, H+ transporting, mitochondrial F1 complex, gamma polypeptide 1	Oxidative phosphorylation	Adipocyte
ATP5F1	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit B1	Oxidative phosphorylation	-
ATP5J	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F6	Oxidative phosphorylation	Adipocyte
ATP5J2	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit F2	Oxidative phosphorylation	-
ATP6V1D	ATPase, H+ transporting, lysosomal 34kDa, V1 subunit D	Oxidative phosphorylation	Adipocyte
ATPAF1	ATP synthase mitochondrial F1 complex assembly factor 1	Oxidative phosphorylation	-
CLYBL	Citrate lyase beta like	Fatty acid synthesis	-
COX4I1	Cytochrome c oxidase subunit IV isoform 1	Oxidative phosphorylation	-
COX5A	Cytochrome c oxidase subunit Va	Oxidative phosphorylation	Adipocyte
COX5B	Cytochrome c oxidase subunit Vb	Oxidative phosphorylation	Adipocyte
COX6B1	Cytochrome c oxidase subunit Vib polypeptide 1 (ubiquitous)	Oxidative phosphorylation	-
COX7A1	Cytochrome c oxidase subunit VIIa polypeptide 1 (muscle)	Oxidative phosphorylation	Adipocyte
COX7A2	Cytochrome c oxidase subunit VIIa polypeptide 2 (liver)	Oxidative phosphorylation	-
COX7B	Cytochrome c oxidase subunit VIIb	Oxidative phosphorylation	-
COX7C	Cytochrome c oxidase subunit VIIc	Oxidative phosphorylation	Adipocyte
COX8A	Cytochrome c oxidase subunit 8A (ubiquitous)	Oxidative phosphorylation	Adipocyte
CYCS	Cytochrome c somatic	Oxidative phosphorylation	-

DGAT1	Diacylglycerol O-acyltransferase homolog 1 (mouse)	Triacylglycerol synthesis	Adipocyte
DGAT2	Diacylglycerol O-acyltransferase homolog 2 (mouse)	Triacylglycerol synthesis	Adipocyte
DLAT	Dihydrolipoamide S-acetyltransferase	Pyruvate metabolism	Adipocyte
DLD	Dihydrolipoamide dehydrogenase	Pyruvate metabolism - Citrate cycle (TCA cycle)	Adipocyte
ECHS1	Enoyl Coenzyme A hydratase, short chain, 1, mitochondrial	Mitochondrial fatty acid beta-oxidation	Adipocyte
FADS1	Fatty acid desaturase 1	Fatty acid synthesis	Adipocyte
FADS2	Fatty acid desaturase 2	Fatty acid synthesis	Adipocyte
FH	Fumarate hydratase	Citrate cycle (TCA cycle)	Adipocyte
GAPDH	glyceraldehyde-3-phosphate dehydrogenase	Glycolysis	-
GPI	Glucose phosphate isomerase	Glycolysis	Adipocyte
IDH1	Isocitrate dehydrogenase 1 (NADP+), soluble	Citrate cycle (TCA cycle)	Adipocyte
IDH2	Isocitrate dehydrogenase 2 (NADP+), mitochondrial	Citrate cycle (TCA cycle)	-
LDHA	Lactate dehydrogenase A	Pyruvate metabolism	Adipocyte
LDHD	Lactate dehydrogenase D	Pyruvate metabolism	Adipocyte
ME1	Malic enzyme 1, NADP(+)-dependent, cytosolic	Fatty acid synthesis	Adipocyte
MECR	Mitochondrial trans-2-enoyl-CoA reductase	Mitochondrial fatty acid beta-oxidation	Adipocyte
NDUFA1	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 1, 7.5kDa	Oxidative phosphorylation	-
NDUFA11	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 11, 14.7kDa	Oxidative phosphorylation	-
NDUFA2	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 2, 8kDa	Oxidative phosphorylation	Adipocyte
NDUFA6	NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 6, 14kDa	Oxidative phosphorylation	Adipocyte
NDUFAB1	NADH dehydrogenase (ubiquinone) 1, alpha/beta subcomplex, 1, 8kDa	Oxidative phosphorylation	Adipocyte
NDUFB2	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 2, 8kDa	Oxidative phosphorylation	Adipocyte
NDUFB3	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 3, 12kDa	Oxidative phosphorylation	Adipocyte
NDUFB5	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 5, 16kDa	Oxidative phosphorylation	Adipocyte
NDUFB7	NADH dehydrogenase (ubiquinone) 1 beta subcomplex, 7, 18kDa	Oxidative phosphorylation	Adipocyte
NDUFS1	NADH dehydrogenase (ubiquinone) Fe-S protein 1, 75kDa (NADH-coenzyme Q reductase)	Oxidative phosphorylation	Adipocyte
NDUFS2	NADH dehydrogenase (ubiquinone) Fe-S protein 2, 49kDa (NADH-coenzyme Q reductase)	Oxidative phosphorylation	Adipocyte

NDUFS3	NADH dehydrogenase (ubiquinone) Fe-S protein 3, 30kDa (NADH-coenzyme Q reductase)	Oxidative phosphorylation	Adipocyte
NDUFS6	NADH dehydrogenase (ubiquinone) Fe-S protein 6, 13kDa (NADH-coenzyme Q reductase)	Oxidative phosphorylation	Adipocyte
NDUFS7	NADH dehydrogenase (ubiquinone) Fe-S protein 7, 20kDa (NADH-coenzyme Q reductase)	Oxidative phosphorylation	Adipocyte
NDUFV1	NADH dehydrogenase (ubiquinone) flavoprotein 1, 51kDa	Oxidative phosphorylation	Adipocyte
NDUFV2	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24kDa	Oxidative phosphorylation	Adipocyte
PC	Pyruvate carboxylase	Pyruvate metabolism	Adipocyte
PDHA1	Pyruvate dehydrogenase (lipoamide) alpha 1	Pyruvate metabolism	Adipocyte
PDHX	Pyruvate dehydrogenase complex, component X	Pyruvate metabolism	Adipocyte
PFKFB1	6-phosphofructo-2-kinase/fructose-2,6-biphosphatase 1	Glycolysis	Adipocyte
PGAM1	Phosphoglycerate mutase 1 (brain)	Glycolysis	-
PGK1	Phosphoglycerate kinase 1	Glycolysis	-
PGM1	Phosphoglucomutase 1	Glycogenolysis	Adipocyte
PPAP2A	Phosphatidic acid phosphatase type 2A	Triacylglycerol synthesis	Adipocyte
QP-C	UQCRQ ubiquinol-cytochrome c reductase, complex III subunit VII, 9.5kDa	Oxidative phosphorylation	-
SCD	Stearoyl-CoA desaturase (delta-9-desaturase)	Fatty acid synthesis	Adipocyte
SDHA	Succinate dehydrogenase complex, subunit A, flavoprotein (Fp)	Citrate cycle (TCA cycle)	Adipocyte
SDHD	Succinate dehydrogenase complex, subunit D, integral membrane protein	Citrate cycle (TCA cycle)	Adipocyte
SLC25A1	Solute carrier family 25 (mitochondrial carrier; citrate transporter), member 1	Fatty acid synthesis	Adipocyte
SLC25A4	Solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 4	Oxidative phosphorylation	Adipocyte
SLC25A5	Solute carrier family 25 (mitochondrial carrier; adenine nucleotide translocator), member 5	Oxidative phosphorylation	-
SUCLG1	Succinate-CoA ligase, alpha subunit	Citrate cycle (TCA cycle)	Adipocyte
UCRC	Ubiquinol-cytochrome c reductase complex (7.2 kD)	Oxidative phosphorylation	Adipocyte
UQCR	Ubiquinol-cytochrome c reductase, 6.4kDa subunit	Oxidative phosphorylation	Adipocyte
UQCRC1	Ubiquinol-cytochrome c reductase core protein I	Oxidative phosphorylation	-
UQCRC2	Ubiquinol-cytochrome c reductase core protein II	Oxidative phosphorylation	Adipocyte
UQCRFS1	Ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1	Oxidative phosphorylation	Adipocyte
UQCRH	Ubiquinol-cytochrome c reductase hinge protein	Oxidative phosphorylation	Adipocyte

Supplementary Table A7: List of differentially expressed genes related to macrophage activity during dietary intervention.

Gene symbol	Gene name	Pathway	Cell specificity
ACTB	Actin, beta	Cytoskeleton signaling	-
ACTC	actin, alpha, cardiac muscle 1	Cytoskeleton signaling	-
ACTG1	Actin, gamma 1	Cytoskeleton signaling	-
ACTR3	ARP3 actin-related protein 3 homolog (yeast)	Cytoskeleton signaling	-
ARPC1B	Actin related protein 2/3 complex, subunit 1B, 41kDa	Cytoskeleton signaling	-
ARPC2	Actin related protein 2/3 complex, subunit 2, 34kDa	Cytoskeleton signaling	-
C1QA	Complement component 1, q subcomponent, A chain	Complement activation	Macrophage
C1QB	Complement component 1, q subcomponent, B chain	Complement activation	Macrophage
C1QC	Complement component 1, q subcomponent, C chain	Complement activation	Macrophage
CCL13	Chemokine (C-C motif) ligand 13	Cell chemotaxis and adhesion	Macrophage
CCL2	Chemokine (C-C motif) ligand 2	Cell chemotaxis and adhesion	-
CCR1	Chemokine (C-C motif) receptor 1	Cell chemotaxis and adhesion	-
CCR5	Chemokine (C-C motif) receptor 5	Cell chemotaxis and adhesion	Macrophage
CD14	CD14 molecule	NFkB activation	Macrophage
CD163	CD163 molecule	Macrophage activation	Macrophage
CD209	CD209 molecule	Antimicrobial defense	Macrophage
CD33	CD33 molecule	Cell chemotaxis and adhesion	Macrophage
CD53	CD53 molecule	Antimicrobial defense	-
CD68	CD68 molecule	Acute phase response	Macrophage
CD97	CD97 molecule	Cell chemotaxis and adhesion	-
CSF1R	Colony stimulating factor 1 receptor	Macrophage activation	Macrophage
CTSA	Cathepsin A	Extra cellular matrix remodelling	-
CTSB	Cathepsin B	Extra cellular matrix remodelling	Macrophage
CTSC	Cathepsin C	Extra cellular matrix remodelling	Macrophage
CTSS	Cathepsin S	Extra cellular matrix remodelling	-
CTSZ	Cathepsin Z	Extra cellular matrix remodelling	-
CXCL9	Chemokine (C-X-C motif) ligand 9	Cell chemotaxis and adhesion	-
FCGR2B	Fc fragment of IgG, low affinity IIb, receptor (CD32)	Antigen presentation	Macrophage
FN1	Fibronectin 1	Extra cellular matrix remodelling	-
HLA-DMA	Major histocompatibility complex, class II, DM alpha	Antigen presentation	Macrophage
HLA-DMB	Major histocompatibility complex, class II, DM beta	Antigen presentation	Macrophage
HLA-DPA1	Major histocompatibility complex, class II, DP alpha 1	Antigen presentation	-
HLA-DPB1	Major histocompatibility complex, class II, DP beta 1	Antigen presentation	-
HLA-DQA2	major histocompatibility complex, class II, DQ alpha 2	Antigen presentation	-
HLA-DQB1	Major histocompatibility complex, class II, DQ beta 1	Antigen presentation	-
IL10Ra	Interleukin 10 receptor, alpha	Interleukin signaling	-
IL10RB	Interleukin 10 receptor, beta	Interleukin signaling	-

IL1R1	Interleukin 1 receptor, type I	Interleukin signaling	-
IQGAP2	IQ motif containing GTPase activating protein 2	Cytoskeleton signaling	-
IRAK1	Interleukin-1 receptor-associated kinase 1	NFkB activation	-
ITGAM	Integrin, alpha M (complement component 3 receptor 3 subunit)	Cell chemotaxis and adhesion	-
ITGAV	Integrin, alpha V (vitronectin receptor, alpha polypeptide, antigen CD51)	Cell chemotaxis and adhesion	-
LOX	Lysyl oxidase	Extra cellular matrix remodelling	-
LOXL2	Lysyl oxidase-like 2	Extra cellular matrix remodelling	-
MARCO	Macrophage receptor with collagenous structure	Antimicrobial defense	Macrophage
MMP19	Matrix metallopeptidase 19	Extra cellular matrix remodelling	-
MMP9	Matrix metallopeptidase 9 (gelatinase B, 92kDa gelatinase, 92kDa type IV collagenase)	Extra cellular matrix remodelling	-
MRC1L1	Mannose receptor, C type 1-like 1	Antimicrobial defense	Macrophage
MSR1	Macrophage scavenger receptor 1	Antimicrobial defense	Macrophage
MyD88	Myeloid differentiation primary response gene (88)	NFkB activation	-
NFKBIE	Nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor, epsilon	NFkB activation	-
PLAU	Plasminogen activator, urokinase	Extra cellular matrix remodelling	-
RAC2	Ras-related C3 botulinum toxin substrate 2 (rho family, small GTP binding protein Rac2)	Cytoskeleton signaling	-
SPP1	Secreted phosphoprotein 1 (osteopontin, bone sialoprotein I, early T-lymphocyte activation 1)	Cell chemotaxis and adhesion	Macrophage
STAT3	Signal transducer and activator of transcription 3 (acute-phase response factor)	signal transduction	-
TGFBI	Transforming growth factor, beta-induced, 68kDa	Extra cellular matrix remodelling	Macrophage
TLR4	Toll-like receptor 4	NFkB activation	-
XLKD1	Lymphatic vessel endothelial hyaluronan receptor 1 (LYVE-1)	Cell chemotaxis and adhesion	-