

**Supplementary Table 1 Skeletal muscle up regulated genes**

Seq Derived From	Title	Putative Function	Gene Symbol	FC	SLR
X15939	myosin heavy chain, cardiac muscle, fetal	Contraction	Myh7	4.01	2.00
M13100	Heme oxygenase-3 (HO-3)	Detoxification/oxidative stress		2.19	1.13
AI012030	Matrix Gla protein	Inhibition of vascular calcification	Mgp	2.05	1.03
U83880	glycerol-3-phosphate dehydrate dehydrogenase	Metabolism		1.82	0.86
J02585	Stearyl-CoA desaturase	Metabolism/lipid		23.58	4.56
K01934	spot 14	Metabolism/lipid		9.23	3.21
X07686	ESTs	not known		1.94	0.95
AA892522	ESTs	not known		2.24	1.16
X05472	ESTs	not known		2.66	1.41
X05472	ESTs	not known		2.70	1.43
X05472	ESTs	not known		6.21	2.63
X61295	L1 retroposon ORF2	not known		1.93	0.95
X70223	peroxisomal membrane protein 2	not known	Pxmp2	1.91	0.93
AA799729	Phosphodiesterase 4B cAMP-specific	signaling	Pde4b	1.90	0.92
U20796	nuclear receptor Rev-ErbA-beta mRNA	Nuclear factor		1.81	0.86
AB016532	period homolog 2 (Drosophila)	Nuclear factor	Per2	2.44	1.29
J03179	D site albumin promoter binding protein	Transcriptor factor	Dbp	2.76	1.46
J03179	D site albumin promoter binding protein	Transcriptor factor	Dbp	3.20	1.68
AF087437	PEBP2 beta	Transcriptor factor		1.74	0.80
M10934	retinol-binding protein	Metabolism		2.21	1.14
U30485	aspartyl-tRNA synthetase			1.76	0.82

**Supplementary Table 2 Skeletal Muscle down regulated genes**

Seq Derived From	Title	Putative Function	Gene Symbol	FC	SLR
Y17295	thiol-specific antioxidant protein	antioxidant	Prdx5	2.96	-1.57
AI045249	heat shock 70kD protein 8	chaperone	Hspa8	2.44	-1.29
X81193	cysteine-rich protein 3	LIM protein	Csrp3	2.36	-1.24
AI172017	aldehyde dehydrogenase 2 mitochondrial	Metabolism	Aldh2	1.81	-0.85
U78977	ATPase Class II type 9A	Metabolism	Atp9a	1.80	-0.85
X76988	sialyltransferase 5	Metabolism	Siat5	2.76	-1.47
D21869	phosphofructokinase-M	Metabolism/Glycolysis /Glycogenesis		4.78	-2.26
U20195	phosphoglucosmutase	Metabolism/Glycolysis /Glycogenesis	Pgm1	2.76	-1.46
M92919	phosphorylase kinase alpha-subunit	Metabolism/Glycolysis /Glycogenesis		2.85	-1.51
AF034577	pyruvate dehydrogenase kinase isoenzyme 4	Metabolism/Glycolysis /Glycogenesis	Pdk4	3.20	-1.68
X13722	LDL-receptor	Metabolism/lipid		3.53	-1.82
X98225	mitochondrial long-chain enoyl-CoA hydratase/3-hydroxyacyl-CoA dehydrogenase alpha-subunit of mitochondrial trifunctional protein	Metabolism/lipid		5.33	-2.41
D00569	2 4-dienoyl CoA reductase 1 mitochondrial	metabolism/lipid	Decr1	2.17	-1.12
AB004329	acetyl-Coenzyme A carboxylase beta	Metabolism/Lipid	Acacb	5.52	-2.46
AA893242	Acyl CoA synthetase long chain	Metabolism/Lipid	Acas	6.70	-2.74
D30647	Acyl-Coa dehydrogenase Very long chain	Metabolism/lipid	Acadvl	2.51	-1.33
AF063302	carnitine palmitoyltransferase	Metabolism/lipid		3.55	-1.83
AF063302	carnitine palmitoyltransferase	Metabolism/lipid		2.96	-1.56
AA859529	diacylglycerol	Metabolism/lipid	Dgat	1.95	-0.96

	acyltransferase				
AI170568	dodecenoyl-Coenzyme A delta isomerase (3 2 trans-enoyl-Coenzyme A isomerase)	Metabolism/lipid	Dci	1.77	-0.82
AB005743	fatty acid transporter	Metabolism/lipid		1.80	-0.85
X51415	hormone sensitive lipase	Metabolism/lipid		3.86	-1.95
U40001	Hormone - sensitive lipase	Metabolism/lipid	Lipe	1.76	-0.82
M33648	mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase	Metabolism/Lipid		5.08	-2.35
AF030163	Uncoupling protein 3 mitochondrial	Metabolism/Lipid	Ucp3	4.47	-2.16
AF035943	Uncoupling protein 3 mitochondrial	Metabolism/Lipid	Ucp3	3.46	-1.79
AA998446	phosphatidylinositol transfer protein beta	Metabolism/lipid/signaling?	Pitpnb	1.78	-0.83
AF080568	phosphate cytidyltransferase 2 ethanolamine	Metabolism/lipids	Pcyt2	2.44	-1.29
Z75029	heat shock protein 70	not Known		2.85	-1.51
D26564	CDC37	not Known	Cdc37	1.92	-0.94
D16309	cyclin D3	not Known		3.21	-1.68
U08136	E selectin ligand 1	not Known	Glg1	2.08	-1.06
AA848268	ESTs	not Known		5.21	-2.38
X99723	ESTs	not Known		4.41	-2.14
AA893212	ESTs	not Known		2.95	-1.56
AI176460	ESTs	not Known		2.85	-1.51
AA799773	ESTs	not Known		2.30	-1.20
AA108277	ESTs	not Known		2.29	-1.20
AA799396	ESTs	not Known		2.26	-1.18
AA891542	ESTs	not Known		2.21	-1.14
AI639312	ESTs	not Known		2.17	-1.12
AA892234	ESTs	not Known		2.14	-1.10
AA685903	ESTs	not Known		2.11	-1.08
AA686031	ESTs	not Known		2.00	-1.00
AA875127	ESTs	not Known		1.94	-0.95
AA800170	ESTs	not Known		1.85	-0.89
AA894321	ESTs	not Known		1.82	-0.86
AI638980	ESTs	not Known		1.77	-0.82
AA892675	ESTs	not Known		3.73	-1.90
AI008074	ESTs Highly similar to HS9B RAT HEAT SHOCK PROTEIN HSP 90-BETA	not Known		3.60	-1.85
Z27118	heat shock protein 70	choperone		13.55	-3.76

E05646	hippocampal cholinergic neurostimulating peptide	not Known		2.20	-1.14
AA900516	peptidyl arginine deiminase type II	not Known	Pdi2	1.86	-0.90
M19936	Prosaposin	not Known	Psap	2.03	-1.02
L19931	solute carrier family 20 member 2	not Known	Slc20a2	2.15	-1.11
D78018	Nuclear Factor IA	Nuclear factor	Nfia	1.89	-0.92
AA799672	ribosomal protein L6	nuclear protrin	Rpl6	1.97	-0.97
L00124	elastase II	Other		4.22	-2.08
AF068202	A kinase (PRKA) anchor protein 1	signaling	Akap1	2.86	-1.52
AJ005984	endosulfine alpha	signaling	Ensa	1.83	-0.87
AI136977	ESTs Highly similar to JN0873 immunophilin p59 - mouse	signaling		2.81	-1.49
AI231547	ESTs Highly similar to JN0873 immunophilin p59 - mouse	signaling		1.90	-0.93
AI011376	ESTs Moderately similar to S78100 MAPK-activated protein kinase	signaling		2.03	-1.02
AA859981	ESTs Weakly similar to MYOP RAT MYO-INOSITOL-1(OR 4)-MONOPHOSPHATASE	signaling		2.03	-1.02
AA817892	guanine nucleotide binding protein beta 2 subunit	signaling	Gnb2	1.79	-0.84
M15481	insulin-like growth factor1	signaling	(IGF-1)	3.53	-1.82
AA963674	mitogen activated protein kinase kinase 2	signaling	Map2k2	2.08	-1.06
S61973	NMDA receptor glutamate-binding subunit	Signaling		2.69	-1.43
AI137862	p38 mitogen activated protein kinase	signaling	Mapk14	1.89	-0.92
Y08355	PKC-zeta-interacting protein	Signaling		2.00	-1.00
D17521	protein kinase C-regulated chloride channel	signaling		2.11	-1.08
U57500	protein tyrosine phosphatase alpha	Signaling		2.06	-1.05
U57501	protein tyrosine phosphatase gamma	Signaling		5.38	-2.43
U02553	protein tyrosine phosphatase non-	Signaling	Ptpn16	2.11	-1.08

	receptor type 16				
L19933	Protein tyrosine phosphatase receptor type D	signaling	Ptprd	2.88	-1.53
D14418	regulatory subunit of protein phosphatase 2A	signaling		1.97	-0.98
X96488	SAP kinase-3	Signaling	Sapk3	2.89	-1.53
L27112	stress activated protein kinase alpha II	signaling	SAPK	2.15	-1.10
AF039085	synaptogyrin 2	signaling	Syng2	2.67	-1.42
AJ012603	TUMOR NECROSIS FACTOR-ALPHA CONVERTING ENZYME	Signaling	Adam17	2.89	-1.53
AI237654	upregulated by 1 25-dihydroxyvitamin D-3	signaling/Redox	Vdup1	2.24	-1.16
U31816	calcium channel alpha-1S subunit (ROB1)	signaling		22.20	-4.47
X53363	calreticulin	signaling	Calr	2.68	-1.42
S74351	protein tyrosine phosphatase	signaling		2.82	-1.49
X52815	actin gamma	structure		1.76	-0.82
U77697	adhesion molecule-1/CD31	structure		2.48	-1.31
D90401	afadin	structure	AF-6	1.97	-0.98
AA874802	Histone H1-0	structure	H1f0	1.77	-0.83
S72407	laminin M subunit	structure		6.88	-2.78
AI227608	microtubule-associated protein tau	structure	Mapt	2.00	-1.00
S81353	sulfated glycoprotein-1	structure		4.34	-2.12
AA874813	hypertension-related protein	structure/signaling	LOC64476	2.08	-1.06
Z78279	procollagen type I alpha 1	Struture	Col1a1	1.77	-0.82
X77934	amyloid precursor-like protein 2	Struture		2.29	-1.20
U75920	APC binding protein EB1	struture		1.78	-0.83
X94551	laminin gamma 1	Struture	Lamc1	2.00	-1.00
M61725	transcription factor UBF2	transcription factor		4.82	-2.27
AF015953	aryl hydrocarbon receptor nuclear translocator-like (BMAL1b)	Transcriptor factor	Arntl	3.48	-1.80
AB012600	aryl hydrocarbon receptor nuclear translocator-like	Transcriptor factor	Arntl	2.86	-1.52

	(BMAL1b)				
X06769	c-fos	Transcriptor factor		3.91	-1.97
X06769	c-fos	Transcriptor factor		2.98	-1.57
M18416	Early growth response 1	Transcriptor factor	Egr1	1.92	-0.94
AF023087	Early growth response 1 (Egr1)	Transcriptor factor		1.84	-0.88
U17254	immediate early gene transcription factor NGFI-B	Transcriptor factor	Nr4a1	2.19	-1.13
U75397	Krox-24	Transcriptor factor		2.11	-1.08
AF003008	Max interacting protein 1	Transcriptor factor	Mxi1	2.60	-1.38
AF020618	progression elevated gene 3	Transcriptor factor		2.16	-1.11
AA892801	eukaryotic translation elongation factor 2	Translation factor	Eef2	7.48	-2.90
AA892801	eukaryotic translation elongation factor 2	Translation factor	Eef2	4.64	-2.21
U05014	eukaryotic translation initiation factor 4E binding protein 1	Translation factor	Eif4ebp1	2.02	-1.02
M34176	beta-chain clathrin associated protein complex AP-2	Transport/trafficking		1.79	-0.84
M86389	Heat shock 27 kDa protein	Transport/trafficking	Hsp27	1.75	-0.81
AA818604	Heat shock protein 70-1	Transport/trafficking	Hspa1a	43.95	-5.46
U87971	syntaxin 5	vescicle transport		7.62	-2.93
X74293	alpha 7A integrin	signaling	Itga7	1.88	-0.91
U22297	casein kinase 1 gamma 2 isoform		Csnk1g2	1.90	-0.92
X74402	GDP-dissociation inhibitor 1	signaling	Gdi1	1.79	-0.84
X62841	potassium channel protein	metabolism		2.96	-1.57
X12535	ras-related protein p23	signaling		2.18	-1.12
U63923	thioredoxin reductase 1	signaling	Txnrd1	1.77	-0.83
U50842	ubiquitin ligase (Nedd4) protein	Metabolism		3.83	-1.94
Skeletal Muscle down regulate					

**Supplementary Table 3 Liver up regulated genes**

Seq_Derived_From	Title	Putative Function	Gene_Symbol	FC ER	SLR ER
J05035	Steroid-5-alpha-reductase alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1)	Metabolism/Steroid	Srd5a1	1.741358	0.800213
J05035	Steroid-5-alpha-reductase alpha polypeptide 1 (3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 1)	Metabolism/Steroid	Srd5a1	2.721199	1.444242
AI171355	CDK110	?		2.452207	1.294081
X05472	EST	?		1.862372	0.897141
X07686	EST	?		2.207542	1.142441
X05472	EST	?		2.214567	1.147024
X05472	EST	?		2.975044	1.572911
M23572	ESTs	?		1.765966	0.820458
AI179916	ESTs	?		1.84061	0.880184
AI179445	ESTs	?		1.881601	0.911961
AA799889	ESTs	?		1.924763	0.944681
AI180108	ESTs	?		2.106499	1.074847
AA893192	ESTs	?		2.484779	1.313118
AI639525	ESTs	?		78.05483	6.286416
X61295	L1 retroposon ORF2	?		1.978647	0.984514
U83119	L1 retrotransposon ORF2	?		1.844622	0.883325
M13100	Rattus norvegicus heme oxygenase-3 (HO-3)	Detoxification/oxidative stress		1.89129	0.919371
M13100	Rattus norvegicus heme oxygenase-3 (HO-3)	Detoxification/oxidative stress		1.933847	0.951474
M13100	Rattus norvegicus heme oxygenase-3 (HO-3)	Detoxification/oxidative stress		2.104573	1.073527
M13100	Rattus norvegicus heme oxygenase-3 (HO-3)	Detoxification/oxidative stress		2.497874	1.320701
M64755	cysteine-sulfinatase decarboxylase	Metabolism/Prot	Csad	1.909806	0.933426
AA926149	Catalase	Metabolism	Cat	5.601959	2.485931
AA945573	cytochrome P450 2c39	Metabolism	Cyp2c39	2.774676	1.47232
AI104679	ESTs	Metabolism		1.90951	0.933202
AI105137	GLUTATHIONE S-TRANSFERASE MITOCHONDRIAL	Metabolism		2.495572	1.31937
AI137856	P450 (cytochrome) oxidoreductase	Metabolism	Por	2.231119	1.157768
M10068	P450 (cytochrome) oxidoreductase	Metabolism	Por	2.49464	1.318831
X13119	serine dehydratase	Metabolism		4.247499	2.086613

E01524	soluble NADPH-cytochrome P450 reductase	Metabolism		1.939159	0.955431
J03865	serine dehydratase (SDH2)	Metabolism/aa		2.406024	1.266651
J03863	serine dehydratase	Metabolism/aa	Sds	3.018234	1.593705
X05684	Pyruvate kinase liver	Metabolism/Glycolysis	PKlr	2.242375	1.165028
J05210	ATP citrate lyase	Metabolism/lipid	Acly	1.762496	0.81762
S69874	cutaneous fatty acid-binding protein	Metabolism/lipid	C-FABP	2.677294	1.420776
AI008020	cytosolic malic enzyme	Metabolism/lipid		2.022017	1.015795
M76767	fatty acid synthase	Metabolism/lipid	RATFASA	1.907288	0.931522
AI175764	liver stearyl-CoA desaturase	Metabolism/lipid		3.549624	1.827666
M26594	malic enzyme	Metabolism/lipid		4.349691	2.120913
AI171506	Malic enzyme 1 soluble	Metabolism/lipid	Me1	3.295718	1.720593
AI171506	Malic enzyme 1 soluble	Metabolism/lipid	Me1	3.537556	1.822753
AF036761	stearoyl-CoA desaturase 2	Metabolism/lipid		5.542055	2.470421
X91234	17-beta hydroxysteroid dehydrogenase type 2	Metabolism/steroid	Hsd17b2	2.622886	1.391155
AA925473	cell division cycle 42	signaling	Cdc42	2.676876	1.42055
S77528	C/EBP-related transcription factor	transcription factor		1.742714	0.801336
AA900476	Cbp/p300-interacting transactivator	transcription factor	Cited2	2.220481	1.150872
J03179	D site albumin promoter binding protein	transcription factor	Dbp	2.474591	1.30719
J03179	D site albumin promoter binding protein	transcription factor	Dbp	2.867065	1.519575
AF072439	zinc finger protein 37	transcription factor	Zfp37	2.074963	1.053085
AI011998	Microvascular endothelial differentiation gene 1	Transport/ER	Mdg1	1.760046	0.815614
D89375	dopa/tyrosine sulfotransferase	signaling	LOC64305	3.475152	1.797076
AB016532	period homolog 2 (Drosophila)	nuclear factor	Per2	1.926878	0.946265
Liver up regulated					



**Supplementary Table 4 Liver down regulated genes**

Seq Derived From	Title	Putative Function	Gene Symbol	FC	SLR
M60921	B-cell translocation gene 2	anti-proliferative	Btg2	1.79	-0.84
AB017260	carnitine transporter solute carrier family 22 (organic cation transporter) member 5	Metabolism	Slc22a5	2.52	-1.33
X07259	cytochrome P-452	Metabolism		1.95	-0.97
AI178971	Hemoglobin alpha 1	Metabolism	Hba1	1.99	-0.99
M96601	taurine/beta-alanine transporter	Metabolism	Slc6a6	2.41	-1.27
U07971	L-arginine glycine amidinotransferase	Metabolism/aa	Gatm	1.77	-0.82
Y09333	mitochondrial very-long-chain acyl-CoA thioesterase	Metabolism/lipid		2.99	-1.58
D00569	2,4-dienoyl CoA reductase 1, mitochondrial	Metabolism/lipid	Decr1	2.01	-1.01
D10262	choline kinase	Metabolism/lipid	Chk	2.14	-1.10
X60328	cytosolic epoxide hydrolase	Metabolism/lipid	Ephx2	1.90	-0.93
AI170568	dodecenoyl-Coenzyme A delta isomerase	Metabolism/lipid	Dci	1.81	-0.86
U08976	enoyl hydratase	Metabolism/lipid	Ech1	2.02	-1.02
X13044	CD74 antigen	Other	Cd74	1.98	-0.99
L00117	elastase I	Other		6.43	-2.68
S69383	12-lipoxygenase	signaling		1.79	-0.84
M34253	Interferon regulatory factor 1	signaling	Irf1	1.99	-1.00
D86041	NG dimethylarginine dimethylaminohydrolase	signaling	Ddah1	2.60	-1.38
AA799729	Phosphodiesterase 4B	signaling	Pde4b	2.11	-1.08
AA900380	tumor necrosis factor I receptor	signaling	(TNFR-1)	4.89	-2.29
X65036	alpha 7A integrin	Structure	Itga7	1.76	-0.82
AB012600	aryl hydrocarbon receptor nuclear translocator-like	Transcriptor Factor	Arntl	10.81	-3.43
AF015953	aryl hydrocarbon receptor nuclear translocator-like	Transcriptor Factor	Arntl	4.67	-2.22
M18416	Early growth response 1	Transcriptor Factor	Egr1	2.42	-1.28
U75397	Krox-24	Transcriptor Factor		2.29	-1.20
AF023087	nerve growth factor induced factor A	Transcriptor Factor		2.15	-1.11

**Supplementary table 5 Visceral Fat up regulated RNA (Energy restricted ZDF rats vs. Control ZDF rats)**

Seq Derived From	Title	Putative function	FC	SLR
S77900	myosin regulatory light chain isoform C	Structure	157.05	7.30
AA945169	Transthyretin (prealbumin, amyloidosis type I)	Structure	64.01	6.00
D10261	alpha 2 HS-glycoprotein alpha 2 (fetuin)	Structure	21.36	4.42
M73701	troponin I, skeletal, fast 2	Structure	7.80	2.96
X59962	Testis-specific histone 2b	Structure	3.83	1.94
AA891132	LIC-2 dynein light intermediate chain 53/55	Structure	3.44	1.78
AB008682	fibroblast growth factor 17	Structure	1.96	0.97
L24777	tropomyosin 3, gamma	Structure	1.79	0.84
AI639484	synaptic vesicle glycoprotein 2 b	Signaling	175.56	7.46
M74054	Angiotensin II receptor, type 1 (AT1A)	Signaling	22.30	4.48
L15556	Phospholipase C , beta4	Signaling	15.20	3.93
AF022083	Guanine nucleotide-binding protein beta 1	Signaling	10.45	3.38
D12524	c-kit receptor tyrosine kinase	Signaling	9.84	3.30
Y13400	chemokine (C-C) receptor 3	Signaling	7.83	2.97
L07380	growth hormone-releasing factor receptor	Signaling	5.07	2.34
U57499	protein tyrosine phosphatase SH-PTP2	Signaling	4.40	2.14
U42976	Acetylcholine receptor beta 4	Signaling	4.16	2.06
D00036	phospholipase A2, group IB, pancreas	Signaling	3.66	1.87
D13213	Glutamate receptor, ionotropic, N-methyl D-aspartate 2D	Signaling	3.52	1.82
U34684	interleukin-1-beta-converting enzyme	Signaling	3.48	1.80
D13376	Adenylate kinase 1	Signaling	3.43	1.78
AI180410	Prolactin-like protein C	Signaling	3.35	1.74
AF030253	vesicular inhibitory amino acid transporter	Signaling	3.27	1.71
AF091715	G protein-coupled receptor	Signaling	3.18	1.67

L19180	Protein tyrosine phosphatase, receptor type, D	Signaling	3.12	1.64
L23088	Selectin, platelet	Signaling	2.76	1.47
U53475	GTPase Rab8b (Rab8b)	Signaling	2.65	1.41
X00336	interferon-alpha 1 (IFN-alpha1)	Signaling	2.60	1.38
D86039	ATP-sensitive inwardly rectifying K+ channel, BIR(Kir6.2),	Signaling	2.56	1.36
AF092733	growth/differentiation factor 11	Signaling	2.53	1.34
L02615	protein kinase inhibitor, alpha	Signaling	2.49	1.31
U33935	urocortin	Signaling	1.96	0.97
X83264	vasopressin V2 receptor	Signaling	1.78	0.83
M13949	Retinol-binding protein 2, cellular	Nuclear Factor	15.14	3.92
U17254	immediate early gene transcription factor NGFI-B	Nuclear Factor	6.87	2.78
D13309	DNA-binding protein B	Nuclear Factor	4.40	2.14
AB017044	Hepatocyte nuclear factor 3 gamma	Nuclear Factor	2.16	1.11
AF087437	PEBP2 beta	Nuclear Factor	1.95	0.97
M73553	Lectin, galactose binding, soluble 4 (Galectin-4)	Metabosim	124.45	6.96
L07114	Apolipoprotein B editing protein	Metabosim	97.57	6.61
U73174	glutathione reductase	Metabosim	24.10	4.59
S52878	fatty acid-binding protein	Metabosim	23.89	4.58
U72410	Potassium channel, inwarding rectifying, subfamily J, member 3	Metabosim	11.55	3.53
AA924198	mevalonate kinase	Metabosim	11.18	3.48
U76220	cyclic nucleotide-gated cation channel	Metabosim	8.36	3.06
L07281	carboxypeptidase E	Metabosim	6.88	2.78
AA925752	CD36 antigen (collagen type I receptor, thrombospondin receptor)	Metabosim	4.99	2.32
AA849722	proteasome (prosome, macropain) subunit, beta type 1	Metabosim	4.82	2.27

AF062740	pyruvate dehydrogenase phosphatase isoenzyme 1	Metabosim	4.60	2.20
L04635	lactase phlorizin hydrolase	Metabosim	4.28	2.10
U01348	N-acetyltransferase 2 (arylamine N-acetyltransferase)	Metabosim	3.43	1.78
V01225	pancreatic amylase	Metabosim	3.39	1.76
V01235	Fatty acid binding protein 1 (liver)	Metabosim	3.12	1.64
AA945573	cytochrome P450, 2c39	Metabosim	2.80	1.48
AF061957	potassium channel (elk1)	Metabosim	2.75	1.46
AB009463	low density lipoprotein receptor-related protein 3	Metabosim	2.37	1.24
U91561	pyridoxine 5'-phosphate oxidase	Metabosim	2.36	1.24
U02096	fatty acid binding protein 7, brain	Metabosim	2.27	1.18
AA859666	mitochondrial dicarboxylate carrier	Metabosim	2.11	1.08
U77880	rolipram-insensitive phosphodiesterase type 7	Metabosim	1.98	0.98
L24389	galactosyltransferase associated kinase (GTA)	Metabosim	1.75	0.81
U67911	mast cell protease 8	Immune s.	6.18	2.63
M12822	Ig germline kappa-chain gene C-region	Immune s.	3.12	1.64
AI639387	EST	?	94.98	6.57
AI639386	EST	?	51.70	5.69
AI639388	EST	?	40.43	5.34
D50093	prion protein	?	39.31	5.30
AA859806	ESTs	?	37.54	5.23
AI639390	EST	?	33.95	5.09
AA891914	EST	?	23.63	4.56
AA858879	ESTs	?	22.85	4.51
AI639385	EST	?	22.41	4.49
AI639208	EST	?	21.77	4.44
AF078778	ESTs	?	21.54	4.43
AI231778	EST	?	19.95	4.32
AI639479	EST	?	18.29	4.19
AI639383	EST	?	16.35	4.03
M96853	ESTs	?	14.09	3.82
AI639378	EST	?	12.58	3.65
AI639384	EST	?	11.64	3.54
AF057564	ESTs	?	11.44	3.52
AA859694	ESTs	?	10.88	3.44

D37951	human immunodeficiency virus type 1 enhancer-binding protein 2	?	10.32	3.37
AA874982	ESTs	?	10.15	3.34
AA859680	ESTs	?	10.09	3.34
D37934	5E5 antigen	?	9.26	3.21
S78284	EST	?	8.91	3.16
U01022	EST	?	6.92	2.79
AA859661	ESTs	?	6.75	2.76
D50436	ferredoxin 1	?	6.03	2.59
AI639303	EST	?	5.62	2.49
AI639516	EST	?	5.61	2.49
AF087945	ESTs	?	5.52	2.46
AI639381	EST	?	4.98	2.32
AF007890	resection-induced TPI (rs11)	?	4.86	2.28
AI639394	EST	?	4.79	2.26
AA964320	ESTs	?	4.71	2.24
AF040961	Persephin	?	4.55	2.19
AA875316	EST	?	4.41	2.14
AF061947	cain	?	4.38	2.13
AF081503	ESTs	?	3.93	1.97
AI639209	EST	?	3.79	1.92
AI638939	EST	?	3.79	1.92
AI639337	EST	?	3.69	1.88
AA686870	EST	?	3.52	1.81
D49363	perchloric acid soluble protein	?	3.11	1.64
AI639379	EST	?	3.02	1.59
H31287	EST	?	2.85	1.51
AA894029	EST	?	2.83	1.50
AA800908	ESTs	?	2.73	1.45
AI178971	Hemoglobin, alpha 1	?	2.60	1.38
AI232012	EST	?	2.58	1.37
AA892986	EST	?	2.40	1.26
L23077	ESTs	?	2.39	1.26
AA799751	ESTs	?	2.31	1.21
AF090134	lin-7-Ba	?	2.13	1.09
U52104	rCRMP-4	?	2.03	1.02
AA799691	ESTs	?	2.03	1.02
AA875291	Hras-revertant gene 107	?	2.02	1.02
AI639453	EST	?	2.02	1.01
U32577	M4 protein	?	1.94	0.96
AF056324	scaffold attachment factor B	?	1.89	0.92
AF061752	msf-1	?	1.88	0.91

AA800844	ESTs	?	1.88	0.91
M94064	methyl CpG binding protein 2	?	1.88	0.91
AA892112	EST	?	1.85	0.89
C07012	ESTs	?	1.85	0.88
AI639042	EST	?	1.83	0.87
AA799700	ESTs	?	1.82	0.86
AI639406	EST	?	1.80	0.85
AI639452	EST	?	1.80	0.85
AF016297	neuropilin-2	?	1.80	0.85
AA799654	ESTs	?	1.79	0.84
AA892532	CaBP1	?	2.52	1.33
U20105	synaptotagmin 6	?	1.94	0.96

**Supplementary table 6 Visceral fat down regulated (Energy restricted ZDF rats vs. Control ZDF rats)**

Seq Derived From	Title	Putative Function	FC	SLR
U53214	brain tubulin tyrosine ligase	Structure	3.75	-1.91
M86341	ADP-ribosylarginine hydrolase	Structure	3.32	-1.73
X63446	alpha 2 HS-glycoprotein alpha 2 (fetuin)	Structure	3.50	-1.81
X74293	alpha 7A integrin	Structure	3.01	-1.59
AF029109	amyloid beta (A4) precursor protein-binding, family A, member 3 (X11-like 2)	Structure	3.70	-1.89
X07648	amyloidogenic glycoprotein	Structure	3.08	-1.62
AI171962	Annexin 1 (p35) (Lipocortin 1)	Structure	2.99	-1.58
X15551	beta-2 glycoprotein I	Structure	3.51	-1.81
L14018	Cartilage homeo protein 1	Structure	2.87	-1.52
U90271	CD152 antigen	Structure	2.80	-1.48
U49062	CD24 antigen	Structure	3.01	-1.59
S79711	CD3 gamma-chain	Structure	3.59	-1.85
M15901	crystallin, beta B3	Structure	5.25	-2.39
M76533	gap junction membrane channel protein beta 5	Structure	3.80	-1.93
M76532	Gap junction membrane channel, protein alpha 4 (connexin 37)	Structure	5.15	-2.37
X62322	granulin	Structure	2.77	-1.47
AA875069	H3 histone, family 3B	Structure	3.12	-1.64
AA964055	histone 2b	Structure	3.03	-1.60

AA892297	histone deacetylase 2	Structure	3.08	-1.62
AJ004912	integral membrane protein Tmp21-I (p23)	Structure	2.68	-1.42
L32132	lipopolysaccharide binding protein	Structure	3.19	-1.67
AA899808	Lysosomal associated membrane protein 1 (120 kDa)	Structure	7.64	-2.93
AI227608	microtubule-associated protein tau	Structure	4.30	-2.10
AA891522	myosin heavy chain, cardiac muscle, fetal	Structure	3.18	-1.67
Z12152	Neurofilament protein, middle polypeptide	Structure	2.93	-1.55
AB022209	ribonucleoprotein F	Structure	4.06	-2.02
AA800054	ribosomal protein L19	Structure	3.00	-1.58
AI176589	ribosomal protein L27	Structure	3.14	-1.65
AI176589	ribosomal protein L27	Structure	3.09	-1.63
U25264	Selenoprotein W muscle 1	Structure	3.42	-1.78
X01114	Seminal vesicle protein-4	Structure	3.25	-1.70
L22190	serum amyloid A protein	Structure	3.05	-1.61
U25281	SH3 domain binding protein (CR16)	Structure	2.70	-1.43
D10587	sialoglycoprotein	Structure	3.34	-1.74
D10587	sialoglycoprotein	Structure	3.32	-1.73
AA858626	synaptic vesicle glycoprotein 2 b	Structure	3.32	-1.73
X67805	Synaptonemal complex protein 1	Structure	3.44	-1.78
U14398	synaptotagmin 4	Structure	4.19	-2.07
U14398	synaptotagmin 4	Structure	3.53	-1.82
M18045	Testis-specific histone 2b	Structure	4.89	-2.29
AF034582	vesicle associated protein	Structure	2.93	-1.55
M24104	Vesicle-associated membrane protein (synaptobrevin 2)	Structure	4.36	-2.12
AI101103	Vesicle-associated membrane protein (synaptobrevin 2)	Structure	3.35	-1.74
M11596	beta-type calcitonin gene-related peptide	Signaling	3.42	-1.77
S46785	insulin-like growth factor binding protein	Signaling	3.47	-1.80
J04636	nicotinic acetylcholine receptor beta-3 subunit precursor	Signaling	4.59	-2.20

AA955808	protein phosphatase V	Signaling	2.77	-1.47
S60953	trkC(ki39)=receptor tyrosine kinase	Signaling	3.02	-1.59
J05276	5-Hydroxytryptamine (serotonin) receptor 1A	Signaling	2.97	-1.57
U59672	5-Hydroxytryptamine (serotonin) receptor 3A	Signaling	3.17	-1.67
X93219	A3 adenosine receptor	Signaling	3.03	-1.60
L08495	ABA-A receptor alpha-6 subunit	Signaling	3.62	-1.86
J05231	Acetylcholine receptor alpha 5	Signaling	3.08	-1.62
L10640	activin type IIB receptor	Signaling	3.25	-1.70
M77245	Adaptor protein complex AP-1, beta 1 subunit	Signaling	2.88	-1.52
M92059	adipsin	Signaling	3.04	-1.60
AI169708	Androsterone UDP-glucuronosyltransferase	Signaling	2.71	-1.44
AA945907	Atrial natriuretic peptide clearance receptor 3	Signaling	4.05	-2.02
AA944156	B-cell translocation gene 2, anti-proliferative	Signaling	2.90	-1.54
U49729	Bcl2-associated X protein	Signaling	3.13	-1.65
J05122	Benzodiazepin receptor (peripheral)	Signaling	3.87	-1.95
A09811	BRL-3A binding protein	Signaling	4.07	-2.03
L13407	calcium/calmodulin-dependent protein kinase II delta subunit	Signaling	4.29	-2.10
L13406	calcium/calmodulin-dependent protein kinase II delta subunit	Signaling	3.88	-1.96
AI013389	Calcium-binding protein, intestinal, vitamin D-dependent (9-kDa CaBP)	Signaling	4.04	-2.01
U53858	calpain 1	Signaling	2.70	-1.43
AA892814	calpain 4	Signaling	4.24	-2.08
M60753	Catecholamine-O-methyltransferase	Signaling	3.27	-1.71
S85184	cathepsin L proenzyme	Signaling	3.45	-1.79
U77349	chemokine receptor CCR2 gene	Signaling	3.19	-1.68
AI179075	Chorionic somatomammotropin hormone 1 variant; Placental lactogen-1	Signaling	4.20	-2.07



AI179075	Chorionic somatomammotropin hormone 1 variant; Placental lactogen-1	Signaling	3.45	-1.79
Y12502	coagulation factor XIIIa	Signaling	6.31	-2.66
L41254	corticosteroid-induced protein	Signaling	2.83	-1.50
M54987	corticotropin releasing hormone	Signaling	3.46	-1.79
S65091	cyclic AMP-regulated phosphoprotein	Signaling	3.43	-1.78
S76145	dopamine transporter	Signaling	3.33	-1.74
M35077	Dopamine-1A receptor	Signaling	3.35	-1.74
A17753	dopaminergic receptor D-3	Signaling	3.40	-1.77
AJ011115	endothelial nitric oxide synthase	Signaling	2.94	-1.56
D10763	Erythropoietin	Signaling	5.01	-2.33
U57439	Estrogen receptor 2 (ER beta)	Signaling	2.81	-1.49
AI105044	estrous-specific protein	Signaling	3.51	-1.81
U58466	fibroblast growth factor receptor 1-like	Signaling	3.42	-1.78
M91599	fibroblast growth factor receptor subtype 4 (FGFR4)	Signaling	3.84	-1.94
AA955600	Fibronectin 1	Signaling	3.16	-1.66
AA944254	G protein-coupled receptor kinase 2	Signaling	3.47	-1.80
U95368	GABA-A receptor pi subunit	Signaling	3.29	-1.72
L01267	general transcription factor IIF, polypeptide 2 (30kD subunit)	Signaling	4.77	-2.25
L08100	Glycosylation dependent cell adhesion molecule 1	Signaling	2.75	-1.46
S68578	gonadotropin-releasing hormone receptor	Signaling	3.63	-1.86
S69316	GRP94/endoplasmic	Signaling	3.03	-1.60
AA943102	GTP cyclohydrolase 1	Signaling	3.89	-1.96
AI012805	Hexokinase 3	Signaling	3.43	-1.78
L22558	high affinity serotonin receptor (5HT7) gene	Signaling	3.03	-1.60
M91595	insulin-like growth factor binding protein-2	Signaling	4.00	-2.00
U04319	Interleukin 1 receptor-like 1 (Fos-responsive gene 1)	Signaling	4.12	-2.04
U04317	Interleukin 1 receptor-like 1 (Fos-responsive gene 1)	Signaling	3.96	-1.98

S79676	interleukin-1 beta-converting enzyme	Signaling	3.40	-1.77
AA891041	jun B proto-oncogene	Signaling	3.77	-1.92
U17995	kappa opioid receptor	Signaling	3.70	-1.89
AA891633	Lysophospholipase	Signaling	3.69	-1.88
L27081	Melanocortin 5 receptor	Signaling	3.17	-1.66
M92076	metabotropic glutamate receptor 3	Signaling	4.87	-2.28
L04485	mitogen activated protein kinase kinase 2	Signaling	3.12	-1.64
AJ005424	mitogen-activated protein kinase 7	Signaling	3.17	-1.66
J05189	Neuromedin K receptor (Neurokinin B/Tachikin 3)	Signaling	3.05	-1.61
M91597	nucleoside diphosphate kinase	Signaling	3.18	-1.67
U55836	parathyroid hormone receptor 2	Signaling	3.12	-1.64
AB009636	phosphatidylinositol 3-kinase, C2 domain containing, gamma polypeptide	Signaling	3.32	-1.73
U03763	phospholipase A2, group V	Signaling	3.45	-1.79
AI234730	platelet-activating factor acetylhydrolase beta subunit (PAF-AH beta)	Signaling	3.27	-1.71
AF032872	potassium channel regulatory protein KChAP	Signaling	3.56	-1.83
AB010963	potassium large conductance calcium-activated channel, subfamily M, beta member 1	Signaling	3.10	-1.63
M59980	potassium voltage gated channel, Shal-related family, member 2	Signaling	3.95	-1.98
U03388	prostaglandin-endoperoxide synthase 1 (prostaglandin G/H synthase and cyclooxygenase)	Signaling	4.48	-2.16
U75932	Protein kinase, cAMP dependent, regulatory, type 1	Signaling	5.00	-2.32
M83298	protein phosphatase 2 (formerly 2A), regulatory subunit B (PR 52), alpha isoform	Signaling	3.38	-1.76
AF020758	purinergic receptor P2X, ligand-gated ion channel, 2	Signaling	3.13	-1.64
AF020758	purinergic receptor P2X, ligand-gated ion channel, 2	Signaling	3.04	-1.60

AA858621	Rattus norvegicus CaM-kinase II inhibitor alpha mRNA, complete cds	Signaling	3.12	-1.64
AF013144	Rattus norvegicus MAP-kinase phosphatase (cpg21) mRNA, complete cds	Signaling	3.30	-1.72
J03627	S-100 related protein, clone 42C	Signaling	3.38	-1.76
X96488	SAP kinase-3	Signaling	3.75	-1.91
AI138070	SH-PTP2 protein tyrosine phosphatase, non-receptor type 11	Signaling	3.83	-1.94
Y08358	small inducible cytokine A11	Signaling	3.52	-1.81
M80570	Solute carrier family 6 (neurotransmitter transporter, dopamine), member 3	Signaling	2.94	-1.56
M95058	steroid 5-alpha-reductase 2	Signaling	3.10	-1.63
U37138	Steroid sulfatase	Signaling	3.74	-1.90
U88630	TGFB inducible early growth response	Signaling	3.75	-1.91
AI639428	Thyroglobulin	Signaling	3.06	-1.61
AI060085	Thyroid stimulating hormone receptor	Signaling	3.97	-1.99
AI169327	tissue inhibitor of metalloproteinase 1	Signaling	3.08	-1.62
AA893702	transcobalamin II precursor	Signaling	3.42	-1.78
U03491	Transforming growth factor, beta 3	Signaling	3.34	-1.74
M77809	transforming growth factor, beta receptor III	Signaling	3.60	-1.85
M97255	trefoil factor 2 (spasmolytic protein 1)	Signaling	3.63	-1.86
S83025	TSH receptor suppressor element-binding protein-1	Signaling	4.54	-2.18
AA942751	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta polypeptide	Signaling	3.95	-1.98
D17614	Tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta polypeptide	Signaling	2.86	-1.52
AI073204	tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, epsilon polypeptide	Signaling	2.93	-1.55

U97143	Tyrosine kinase receptor ligand 2	Signaling	3.43	-1.78
AA850734	vascular endothelial growth factor	Signaling	3.04	-1.61
M86835	Vasopressive intestinal peptide receptor	Signaling	3.48	-1.80
AF000368	voltage-gated sodium channel	Signaling	3.53	-1.82
U50044	Willebrand factor vWf	Signaling	3.91	-1.97
U95113	histone H2a gene	Nuclear factor	3.17	-1.66
AI071866	Nclone10	Nuclear factor	3.70	-1.89
AF052042	zinc finger protein Y1 (RLZF-Y)	Nuclear factor	2.96	-1.56
AF030089	activity and neurotransmitter-induced early gene protein 4 (ania-4)	Nuclear factor	3.17	-1.66
Z38067	c-myc	Nuclear factor	5.13	-2.36
U76635	deoxyribonuclease I	Nuclear factor	3.00	-1.59
AJ011608	DNA polymerase alpha subunit IV	Nuclear factor	3.49	-1.80
AJ011607	DNA polymerase alpha subunit IV	Nuclear factor	3.08	-1.62
AA957640	DNA polymerase beta	Nuclear factor	3.38	-1.76
U83112	forkhead box M1	Nuclear factor	3.03	-1.60
D85760	guanine nucleotide binding protein (G protein) alpha 12	Nuclear factor	3.66	-1.87
D10554	Hepatic nuclear factor 4 (alpha transcription factor 4)	Nuclear factor	3.71	-1.89
L03556	homeo box A5	Nuclear factor	3.57	-1.84
L03557	Homeobox gene A4	Nuclear factor	3.22	-1.69
AB020879	homer, neuronal immediate early gene, 3	Nuclear factor	3.30	-1.72
L23148	Inhibitor of DNA binding 1, helix-loop-helix protein (splice variation)	Nuclear factor	3.32	-1.73
S69329	isl-1	Nuclear factor	3.08	-1.62
S58745	leucine zipper transcription factor	Nuclear factor	3.69	-1.88

Z17223	mesenchyme homeobox 2	Nuclear factor	3.28	-1.71
AI176488	nuclear factor I/B	Nuclear factor	4.95	-2.31
AF014503	nuclear proten 1	Nuclear factor	2.83	-1.50
U10995	nuclear receptor subfamily 2, group F, member 1	Nuclear factor	3.05	-1.61
M34238	nuclear transcription factor-Y alpha	Nuclear factor	3.52	-1.81
U76557	O-linked N-acetylglucosamine (GlcNAc) transferase	Nuclear factor	2.82	-1.50
AA874918	PAK-interacting exchange factor beta	Nuclear factor	3.93	-1.97
U56862	pancreas zinc finger protein	Nuclear factor	2.95	-1.56
U95920	pericentriolar material 1	Nuclear factor	3.43	-1.78
X83546	POU domain, class 3, transcription factor 2	Nuclear factor	3.37	-1.75
M72711	POU domain, class 3, transcription factor 2	Nuclear factor	3.09	-1.63
AA859938	Rattus norvegicus BNIP3L protein (Bnip3l) mRNA, complete cds	Nuclear factor	3.03	-1.60
L01624	serum/glucocorticoid regulated kinase	Nuclear factor	2.84	-1.51
AA899854	topoisomerase (DNA) II alpha	Nuclear factor	9.34	-3.22
AI072435	Y box protein 1	Nuclear factor	2.90	-1.54
S81497	lysosomal acid lipase	Metabolism	3.62	-1.85
AI639174	phospholipase B	Metabolism	3.15	-1.65
D38061	UDP glucuronosyltransferase	Metabolism	3.55	-1.83
L01115	Adenylyl cyclase 6	Metabolism	3.54	-1.83
D14097	aldosterone synthase	Metabolism	3.93	-1.98
AB000507	aquaporin 7	Metabolism	4.27	-2.09
U90887	arginase type II	Metabolism	3.43	-1.78
AI230614	ATPase Na <sup>+</sup> /K <sup>+</sup> transporting beta 1 polypeptide	Metabolism	2.87	-1.52
U78977	ATPase, Class II, type 9A	Metabolism	3.02	-1.59
U78977	ATPase, Class II, type 9A	Metabolism	2.86	-1.51
M74494	ATPase, Na <sup>+</sup> K <sup>+</sup> transporting, alpha 1 polypeptide	Metabolism	3.17	-1.66

AA946532	ATP-binding cassette, sub-family D (ALD), member 3	Metabolism	3.02	-1.60
D88035	beta-1,3-glucuronyltransferase 1 (glucuronosyltransferase P)	Metabolism	3.24	-1.70
M81681	biliverdin reductase A	Metabolism	4.31	-2.11
M93271	branched chain keto acid dehydrogenase kinase	Metabolism	3.41	-1.77
M93257	catechol-O-methyltransferase	Metabolism	3.08	-1.62
AA799326	CD36 antigen (collagen type I receptor, thrombospondin receptor)	Metabolism	4.50	-2.17
M31931	cytochrome P-450	Metabolism	4.24	-2.09
M82855	cytochrome P450IIC13	Metabolism	3.14	-1.65
J03786	cytochrome P450, 2c40	Metabolism	5.11	-2.35
J02657	Cytochrome P450, subfamily IIC (mephenytoin 4-hydroxylase)	Metabolism	3.42	-1.78
AA924267	Cytochrome P450, subfamily IVB, polypeptide 1	Metabolism	4.22	-2.08
D63704	dihydropyrimidinase	Metabolism	3.05	-1.61
D85035	dihydropyrimidine dehydrogenase	Metabolism	3.37	-1.75
M76426	dipeptidylpeptidase 6	Metabolism	4.65	-2.22
X02610	Enolase 1, alpha	Metabolism	3.03	-1.60
S59158	glutamate transporter	Metabolism	4.08	-2.03
D10354	glutamic-pyruvate transaminase (alanine aminotransferase)	Metabolism	4.81	-2.27
X78848	Glutathione-S-transferase, alpha type (Ya)	Metabolism	3.18	-1.67
U26356	glycerol-3-phosphate acyltransferase	Metabolism	3.15	-1.66
L10669	glycogen phosphorylase muscle isozyme	Metabolism	3.16	-1.66
L01793	glycogenin	Metabolism	3.53	-1.82
X08056	guanidinoacetate methyltransferase	Metabolism	3.37	-1.75
M95493	Guanylate cyclase activator 2 (guanylin)	Metabolism	4.09	-2.03
AF022729	HNK-1 sulfotransferase	Metabolism	2.90	-1.54
AF003835	isopentenyl-diphosphate delta isomerase	Metabolism	4.03	-2.01
J05031	Isovaleryl Coenzyme A dehydrogenase	Metabolism	3.93	-1.97

U07181	Lactate dehydrogenase B	Metabolism	3.48	-1.80
M29472	mevalonate kinase	Metabolism	2.75	-1.46
AA874919	mismatch repair protein	Metabolism	3.43	-1.78
X98225	mitochondrial long-chain enoyl-CoA hydratase/3-hydroxyacyl-CoA dehydrogenase alpha-subunit of mitochondrial trifunctional protein	Metabolism	3.16	-1.66
AJ005046	muscle fructose-1 6-bisphosphatase	Metabolism	3.05	-1.61
J04733	N-acylaminoacyl-peptide hydrolase	Metabolism	3.53	-1.82
AI008638	O-acetyltransferase Milk fat globule membrane protein	Metabolism	3.42	-1.77
AA799729	Phosphodiesterase 4B, cAMP-specific (dunce (Drosophila)-homolog phosphodiesterase E4)	Metabolism	3.54	-1.82
M31788	phosphoglycerate kinase 1	Metabolism	3.47	-1.79
M31788	phosphoglycerate kinase 1	Metabolism	3.35	-1.74
J03806	Phospholipase C, gamma 1	Metabolism	3.73	-1.90
U69884	potassium intermediate/small conductance calcium-activated channel, subfamily N, member 3	Metabolism	2.99	-1.58
AA891828	procollagen, type I, alpha 2	Structure	3.02	-1.60
AI073232	proprotein convertase subtilisin/kexin type 7	Metabolism	3.47	-1.80
X15734	S - adenosylmethionine synthetase	Metabolism	4.01	-2.01
M35299	Serine protease inhibitor, kanzal type 1/ Trypsin inhibitor-like protein, pancreatic	Metabolism	4.25	-2.09
X63744	solute carrier family 1, member 3	Metabolism	3.08	-1.62
AF031642	solute carrier family 14, member 2	Metabolism	2.93	-1.55
AI043796	Solute carrier family 18 A2 (vesicular monoamine transporter 2)	Metabolism	3.60	-1.85
D12771	Solute carrier family 25, member 5 (adenine nucleotid translocator 2, fibroblast isoform (ATP-ADP carrier protein))	Metabolism	4.17	-2.06

U60282	solute carrier family 5 (sodium iodide symporter), member 5	Metabolism	3.00	-1.58
U53420	solute carrier family 8 (sodium/calcium exchanger), member 3	Metabolism	3.64	-1.86
U75393	succinate-CoA ligase, GDP-forming, alpha subunit	Metabolism	3.19	-1.67
AA891880	tricarboxylate carrier-like protein	Metabolism	3.08	-1.62
AA818888	ubiquitin A-52 residue ribosomal protein fusion product 1	Metabolism	3.37	-1.75
M31109	UDP-glucuronosyltransferase	Metabolism	4.16	-2.06
J05132	UDP-glucuronosyltransferase 1 family, member 1	Metabolism	3.22	-1.69
L40364	MHC class I RT1.O type -149 processed pseudogene	Immune s.	2.90	-1.54
X60290	immunoglobulin heavy chain variable region	Immune s.	3.63	-1.86
D45240	MHC class II	Immune s.	3.44	-1.78
L13237	polymeric immunoglobulin receptor	Immune s.	3.78	-1.92
Z18877	2'5' oligoadenylate synthetase	Metabolism	4.14	-2.05
AF089825	activin beta E	?	3.90	-1.96
AA943872	Adducin 1, alpha	?	2.85	-1.51
D90401	afadin	?	3.47	-1.79
M90065	angiotensin II receptor	?	3.97	-1.99
U39609	anti-acetylcholine receptor antibody gene, kappa-chain, VJC region, complete cds	?	3.17	-1.66
X03362	Avian erythroblastosis viral (v-erb-B2) oncogene homologue 2 (neuro/glioblastoma derived oncogene homolog)	?	3.18	-1.67
AF065431	Bcl-2 related apoptotic gene product BimL	?	4.36	-2.13
AF096291	Bcl-w protein	?	2.99	-1.58
AA819187	CD38 antigen (ADP-ribosyl cyclase / cyclic ADP-ribose hydrolase)	?	4.06	-2.02
D26564	CDC37 (cell division cycle 37, S. cerevisiae, homolog)	?	3.17	-1.66
AI170212	Clathrin-associated adaptor protein homolog (p47B)	?	2.87	-1.52



Z46374	c-met	?	3.03	-1.60
AI105348	cofilin 1, non-muscle	?	2.72	-1.44
AI071947	Cortactin binding protein 1 (ProSAP1/CortBP1 gene)	?	3.86	-1.95
J00717	Crystallin, gamma polypeptide 3	?	4.95	-2.31
AI231257	cyclin D1	?	3.27	-1.71
Z36980	D-dopachrome tautomerase	?	4.79	-2.26
Y08138	dHand protein	?	2.90	-1.53
M32725	dorsal protein 1	?	3.71	-1.89
L02529	Drosophila polarity gene (frizzled) homologue	?	2.69	-1.43
AA851887	Dynamin 2	?	3.07	-1.62
D26503	dynein-like protein 11	?	3.21	-1.68
AI639159	ESTs	?	5.75	-2.52
AI639182	ESTs	?	4.03	-2.01
AI639198	ESTs	?	3.95	-1.98
AA892813	ESTs	?	3.94	-1.98
U96275	ESTs	?	3.80	-1.93
AI639137	ESTs	?	3.76	-1.91
AI639276	ESTs	?	3.69	-1.88
AI639161	ESTs	?	3.59	-1.84
AA892369	ESTs	?	3.53	-1.82
AI639310	ESTs	?	3.51	-1.81
AA892551	ESTs	?	3.41	-1.77
AA892308	ESTs	?	3.40	-1.77
AA892378	ESTs	?	3.25	-1.70
AA892377	ESTs	?	3.11	-1.64
AA818917	ESTs	?	2.97	-1.57
AA892797	ESTs	?	2.92	-1.55
AI639019	ESTs	?	2.88	-1.53
AA892549	ESTs	?	2.82	-1.49
AI639475	ESTs	?	2.68	-1.42
AA892551	ESTs	?	2.67	-1.42
AA892545	ESTs	?	2.64	-1.40
AA946369	ESTs	?	12.49	-3.64
AA799667	ESTs	?	9.38	-3.23
M24537	ESTs	?	8.35	-3.06
U75925	ESTs	?	7.37	-2.88
AA859495	ESTs	?	6.59	-2.72
AI639457	ESTs	?	5.63	-2.49
AI639158	ESTs	?	5.16	-2.37
AA892866	ESTs	?	5.16	-2.37
AA946040	ESTs	?	5.08	-2.34
AI639443	ESTs	?	4.96	-2.31

AA866248	ESTs	?	4.88	-2.29
AI230778	ESTs	?	4.81	-2.27
AA875192	ESTs	?	4.74	-2.25
AI639136	ESTs	?	4.73	-2.24
AA859593	ESTs	?	4.51	-2.17
AA893592	ESTs	?	4.50	-2.17
AA800853	ESTs	?	4.45	-2.15
AA800549	ESTs	?	4.42	-2.14
AA799591	ESTs	?	4.34	-2.12
AA800885	ESTs	?	4.30	-2.10
AA866272	ESTs	?	4.22	-2.08
AA893183	ESTs	?	4.22	-2.08
AA893390	ESTs	?	4.11	-2.04
AA799543	ESTs	?	4.06	-2.02
AA894037	ESTs	?	4.06	-2.02
AI236601	ESTs	?	4.03	-2.01
AA866294	ESTs	?	4.03	-2.01
AF028784	ESTs	?	4.03	-2.01
H31982	ESTs	?	4.01	-2.00
AA893087	ESTs	?	3.99	-2.00
M94919	ESTs	?	3.94	-1.98
AF023621	ESTs	?	3.94	-1.98
AA894312	ESTs	?	3.93	-1.97
AI639409	ESTs	?	3.91	-1.97
AA800004	ESTs	?	3.88	-1.96
AA859750	ESTs	?	3.87	-1.95
AI638952	ESTs	?	3.84	-1.94
AI639493	ESTs	?	3.83	-1.94
AI639256	ESTs	?	3.83	-1.94
U75928	ESTs	?	3.80	-1.93
AI639498	ESTs	?	3.78	-1.92
AA891631	ESTs	?	3.78	-1.92
H31604	ESTs	?	3.76	-1.91
AA875598	ESTs	?	3.76	-1.91
AA799330	ESTs	?	3.76	-1.91
AA799740	ESTs	?	3.75	-1.91
AA850568	ESTs	?	3.72	-1.90
AA859468	ESTs	?	3.72	-1.89
AA799495	ESTs	?	3.68	-1.88
AA893607	ESTs	?	3.66	-1.87
H33614	ESTs	?	3.66	-1.87
AI103911	ESTs	?	3.63	-1.86
AA800853	ESTs	?	3.62	-1.86
AA859931	ESTs	?	3.62	-1.86
X14848	ESTs	?	3.61	-1.85

AA859828	ESTs	?	3.61	-1.85
AA892207	ESTs	?	3.60	-1.85
L21672	ESTs	?	3.56	-1.83
AB005540	ESTs	?	3.55	-1.83
H31342	ESTs	?	3.49	-1.80
AA875123	ESTs	?	3.47	-1.80
H31625	ESTs	?	3.47	-1.79
AA800855	ESTs	?	3.46	-1.79
AA894101	ESTs	?	3.44	-1.78
AA964615	ESTs	?	3.44	-1.78
U13895	ESTs	?	3.44	-1.78
AI236484	ESTs	?	3.43	-1.78
AA799601	ESTs	?	3.42	-1.77
AA893857	ESTs	?	3.41	-1.77
AA893191	ESTs	?	3.41	-1.77
H33619	ESTs	?	3.41	-1.77
U26310	ESTs	?	3.40	-1.77
AA859495	ESTs	?	3.40	-1.76
X60212	ESTs	?	3.39	-1.76
AF053990	ESTs	?	3.38	-1.76
AA957777	ESTs	?	3.38	-1.76
AA874832	ESTs	?	3.36	-1.75
AI639173	ESTs	?	3.35	-1.74
AA799971	ESTs	?	3.35	-1.74
AA799581	ESTs	?	3.34	-1.74
AI639313	ESTs	?	3.34	-1.74
AA874803	ESTs	?	3.34	-1.74
AA894338	ESTs	?	3.33	-1.73
M76740	ESTs	?	3.32	-1.73
AA891166	ESTs	?	3.31	-1.73
AA893690	ESTs	?	3.31	-1.73
AA799499	ESTs	?	3.31	-1.72
AA875620	ESTs	?	3.30	-1.72
AA800693	ESTs	?	3.30	-1.72
AA799680	ESTs	?	3.29	-1.72
AA859832	ESTs	?	3.27	-1.71
M94557	ESTs	?	3.27	-1.71
AA799551	ESTs	?	3.27	-1.71
U97061	ESTs	?	3.23	-1.69
AA685221	ESTs	?	3.23	-1.69
AA799593	ESTs	?	3.22	-1.69
AA893726	ESTs	?	3.21	-1.68
AI102079	ESTs	?	3.20	-1.68
AA891790	ESTs	?	3.20	-1.68
H31313	ESTs	?	3.20	-1.68

U60145	ESTs	?	3.19	-1.67
AA894193	ESTs	?	3.19	-1.67
X57405	ESTs	?	3.19	-1.67
AA891796	ESTs	?	3.17	-1.66
AA894086	ESTs	?	3.16	-1.66
AA891069	ESTs	?	3.16	-1.66
AA892234	ESTs	?	3.15	-1.66
AA875286	ESTs	?	3.14	-1.65
AA799995	ESTs	?	3.14	-1.65
AA875539	ESTs	?	3.13	-1.65
M87786	ESTs	?	3.13	-1.65
AF053094	ESTs	?	3.12	-1.64
H33750	ESTs	?	3.12	-1.64
AA859877	ESTs	?	3.11	-1.64
L38424	ESTs	?	3.11	-1.64
AA800790	ESTs	?	3.11	-1.64
AA799402	ESTs	?	3.10	-1.63
L13025	ESTs	?	3.10	-1.63
AA891677	ESTs	?	3.10	-1.63
H33149	ESTs	?	3.08	-1.62
L20682	ESTs	?	3.08	-1.62
AA859672	ESTs	?	3.07	-1.62
AI639488	ESTs	?	3.07	-1.62
AA685178	ESTs	?	3.05	-1.61
AA875664	ESTs	?	3.04	-1.61
M23316	ESTs	?	3.04	-1.60
AA893667	ESTs	?	3.04	-1.60
AA874906	ESTs	?	3.03	-1.60
AA851403	ESTs	?	3.02	-1.60
M91235	ESTs	?	3.02	-1.59
AA859612	ESTs	?	3.01	-1.59
AI639236	ESTs	?	3.01	-1.59
AA894199	ESTs	?	3.01	-1.59
AA875103	ESTs	?	3.01	-1.59
AA800566	ESTs	?	3.01	-1.59
AA892238	ESTs	?	3.00	-1.59
AA893980	ESTs	?	2.99	-1.58
AA799538	ESTs	?	2.99	-1.58
AA799893	ESTs	?	2.97	-1.57
AI639530	ESTs	?	2.96	-1.57
AA893184	ESTs	?	2.96	-1.57
AF053991	ESTs	?	2.96	-1.56
AA874968	ESTs	?	2.95	-1.56
AA875602	ESTs	?	2.95	-1.56
AI103396	ESTs	?	2.92	-1.55

AA859976	ESTs	?	2.91	-1.54
AF053992	ESTs	?	2.90	-1.54
AI236597	ESTs	?	2.90	-1.53
J04423	ESTs	?	2.89	-1.53
AA892937	ESTs	?	2.88	-1.53
AA799534	ESTs	?	2.88	-1.53
AA893596	ESTs	?	2.87	-1.52
AA891314	ESTs	?	2.86	-1.51
AI639352	ESTs	?	2.85	-1.51
U70049	ESTs	?	2.85	-1.51
AA892270	ESTs	?	2.84	-1.51
D45247	ESTs	?	2.83	-1.50
AA800456	ESTs	?	2.82	-1.50
AF036335	ESTs	?	2.82	-1.49
AA891171	ESTs	?	2.81	-1.49
AA799996	ESTs	?	2.81	-1.49
AA875286	ESTs	?	2.81	-1.49
AA891890	ESTs	?	2.81	-1.49
AA892888	ESTs	?	2.79	-1.48
AF054241	ESTs	?	2.78	-1.48
AA875427	ESTs	?	2.78	-1.47
AA891842	ESTs	?	2.77	-1.47
AI010371	ESTs	?	2.77	-1.47
AA799494	ESTs	?	2.75	-1.46
AA894130	ESTs	?	2.73	-1.45
AA800503	ESTs	?	2.73	-1.45
AA800265	ESTs	?	2.69	-1.42
AA893022	ESTs	?	2.68	-1.42
AA875023	ESTs	?	2.67	-1.42
AA859509	ESTs	?	2.64	-1.40
AB004278	ESTs	?	2.61	-1.38
AF091578	EVA-TN1 olfactory receptor	?	3.70	-1.89
X56747	fetal intestinal lactase-phlorizin hydrolase precursor	?	3.38	-1.76
AA799645	FXYD domain-containing ion transport regulator 1	?	3.14	-1.65
L14937	germ cell-specific subtilisin-like proprotein convertase PC4	?	3.77	-1.91
D13417	hairy and enhancer of split 1, (Drosophila)	?	3.29	-1.72
AI104388	Heat shock 27 kDa protein	?	2.79	-1.48
AA818604	Heat shock protein 70-1	?	3.29	-1.72
AF091575	HFV-FD1 olfactory receptor	?	3.12	-1.64

AF091572	HGL-SL3 olfactory receptor	?	4.15	-2.05
AF091567	HGL-SP5 olfactory receptor	?	3.77	-1.92
AA944177	High mobility group 1	?	3.46	-1.79
AF036537	homocysteine respondent protein HCYP2	?	4.28	-2.10
AB019693	HP33	?	2.91	-1.54
X76453	Hras-revertant gene 107	?	3.15	-1.66
AF062389	kidney-specific protein (KS)	?	2.81	-1.49
AF016900	latent TGF-beta binding protein-3	?	3.68	-1.88
X74549	leuserpin-2	?	3.96	-1.99
U96490	liver mRNA	?	3.61	-1.85
Y12760	LTBP-2 like protein	?	3.09	-1.63
AF067727	MAD (mothers against decapentaplegic, Drosophila) homolog 1	?	3.05	-1.61
AF042499	MAD (mothers against decapentaplegic, Drosophila) homolog 7	?	3.70	-1.89
AA957923	mast cell protease 2	?	2.94	-1.56
AA963091	matrin cyclophilin (matrin-cyp)	?	4.18	-2.06
L19998	minoxidil sulfotransferase	?	4.30	-2.10
AB000098	MIPP65 protein	?	4.26	-2.09
U76551	Mucin3	?	3.33	-1.74
U45986	Myx	?	3.54	-1.82
AI072098	neuronal pentraxin precursor	?	3.63	-1.86
X98564	neuronal potassium channel alpha subunit	?	3.52	-1.82
AF084186	noerythroid alpha-spectrin 2	?	3.03	-1.60
U95162	nuclear protein E3-3 orf1	?	3.47	-1.79
M76734	odorant-binding protein (RY2G12)	?	4.74	-2.25
AF034900	olfactory receptor-like protein	?	2.92	-1.55
U12623	olfactory cyclic nucleotide-gated channel	?	3.79	-1.92
X17037	OX40 antigen	?	3.22	-1.69
Z23272	PACAP receptor	?	3.15	-1.65
D14909	PACAP receptor	?	2.71	-1.44
AA818152	Peptidylprolyl isomerase A (cyclophilin A)	?	3.38	-1.76
AA891901	polypyrimidine tract binding protein	?	2.79	-1.48

X83580	potassium inwardly-rectifying channel, subfamily J, member 4	?	3.34	-1.74
X99267	presenilin-2	?	3.85	-1.95
X96437	PRG1	?	10.15	-3.34
M75153	RAB11a, member RAS oncogene family	?	2.77	-1.47
AI175776	Rat VL30 element	?	3.86	-1.95
AF012347	Rattus norvegicus Smad8 mRNA, complete cds	?	3.28	-1.71
L14462	related to Drosophila groucho gene	?	4.00	-2.00
L14462	related to Drosophila groucho gene	?	3.95	-1.98
AA997968	RNB6	?	2.89	-1.53
U95157	ryanodine receptor type II	?	2.88	-1.53
AF067650	sarcosine dehydrogenase	?	3.64	-1.87
AB000776	sema domain, transmembrane domain (TM), and cytoplasmic domain, (semaphorin) 6B	?	4.07	-2.02
AA955859	splicing factor	?	3.97	-1.99
AA851749	splicing factor, arginine/serine-rich (transformer 2 Drosophila homolog) 10	?	3.09	-1.63
AA858573	spp-24 precursor	?	2.88	-1.53
AI170380	surfactant-associated protein SP-B	?	4.05	-2.02
D89730	T16	?	3.05	-1.61
X15705	testis-specific heat shock protein-related gene hst70	?	3.83	-1.94
D49836	thymoma viral proto-oncogene 3	?	3.04	-1.61
U18314	Thymopoietin (lamina associated polypeptide 2)	?	3.37	-1.75
U32372	tyrosine-ester sulfotransferase	?	3.33	-1.73
U36773	ESTs	?	4.53	-2.18
AI639487	ESTs	?	3.05	-1.61

**Supplementary Table 7 Pancreatic islets down regulated gene**

Seq. Derived. From	Title	Putative Function	Av FC	Av SLR
U64705	protein synthesis initiation factor 4All gene	translator factor	2.243249	-1.16559
AA900476	Cbp/p300-interacting transactivator, with Glu/Asp-rich carboxy-terminal domain, 2	translator factor	1.830672	-0.87237
AI177986	eukaryotic initiation factor 5 (eIF-5)	translator factor	1.775897	-0.82855
AF096835	eukaryotic translation initiation factor 2 alpha kinase 3	translator factor	2.023612	-1.01693
K02248	somatostatin-14	signal	1.753057	-0.80987
S78218	protein phosphatase 1 beta	signal	1.862604	-0.89732
M25890	Somatostatin	signal	1.904006	-0.92904
AI230256	Inhibitor of DNA binding 2, dominant negative helix-loop-helix protein	Nuclear structure/Translator factor	1.76503	-0.81969
M63485	matrin 3	Nuclear structure/Translator factor	1.831232	-0.87281
AF014503	nuclear proten 1	Nuclear structure/Translator factor	2.547968	-1.34935
AF062594	nucleosome assembly protein 1-like 1	Nuclear structure/Translator factor	1.766441	-0.82085
M55015	nucleolin	nuclear structure	1.823014	-0.86633
J02791	Acyl-Coenzyme A dehydrogenase, C-4 to C-12 straight-chain	Metabolism/lipid	2.095506	-1.0673



AA946368	CD36 antigen (collagen type I receptor, thrombospondin receptor)	Metabolism/lipid	2.820445	1.49592	-
AF072411	CD36 antigen (collagen type I receptor, thrombospondin receptor)	Metabolism/lipid	3.783902	1.91987	-
AA925752	CD36 antigen (collagen type I receptor, thrombospondin receptor)	Metabolism/lipid	4.42976	2.14723	-
M33648	Rat mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase mRNA, complete cds	Metabolism/lipid	4.201577	2.07093	-
M33648	Rat mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase mRNA, complete cds	Metabolism/lipid	6.638096	2.73077	-
X02291	aldolase B	Metabolism/Glycolysis	4.860875	2.28122	-
X02284	aldolase B	Metabolism/Glycolysis	2.774691	1.47233	-
AA892395	Aldolase B, fructose-biphosphate	Metabolism/Glycolysis	10.11227	3.33803	-
M86240	Fructose-1,6- biphosphatase	Metabolism/Glycolysis	1.924906	0.94479	-
D89069	carbonyl reductase	Metabolism/detox	1.962817	0.97293	-
U07971	L-arginine: glycine amidinotransferase	Metabolism/creatine	2.304686	1.20457	-
D90404	Cathepsin C (dipeptidyl peptidase I)	Metabolism/aa	2.434653	1.28372	-
U38379	Gamma-glutamyl hydrolase	Metabolism/	1.851138	0.88841	-
M15185	S-adenosyl-L-homocysteine hydrolase	Metabolism	1.944788	0.95961	-
AI232096	solute carrier family 15 (H+/peptide transporter), member 2	Metabolism	2.555441	1.35357	-

S87544	polyprotein 1-microglobulin/bikunin	Immunesystem	1.791154	0.84089
U02506	7 polymeric immunoglobulin receptor	Immunesystem	2.05465	1.03889
U69272	Interleukin 15	Immunesystem	1.78129	0.83292
L14002	polymeric immunoglobulin receptor	Immunesystem	2.078132	1.05529
L14004	polymeric immunoglobulin receptor	Immunesystem	2.194699	1.13402
L14003	polymeric immunoglobulin receptor	Immunesystem	2.517271	1.33186
L13235	polymeric immunoglobulin receptor	Immunesystem	2.532826	1.34075
L13237	polymeric immunoglobulin receptor	Immunesystem	3.300944	1.72288
X99773	serpin, ZG-46p	granule formation	2.122295	1.08563
X07648	amyloidogenic glycoprotein (rAG)	ECM	2.086688	1.06121
AI176422	ESTs	?	1.765041	-0.8197
AA848218	ESTs	?	1.859682	0.89506
AI639488	ESTs	?	1.870243	0.90323
AA799511	ESTs	?	1.899516	0.92563
AA893328	ESTs	?	1.920684	0.94162
AI639417	ESTs	?	2.232915	1.15893
AA859981	ESTs	?	2.866935	1.51951
AA866233	ESTs	?	3.589054	-1.8436
AI177004	3-hydroxy-3-methylglutaryl-Coenzyme A synthase 1	Metabolism/lipid	6.66988	2.73766
U90829	APP-binding protein 1	Metabolism/Apoptosis	2.179213	1.12381

AI230614	ATPase Na <sup>+</sup> /K <sup>+</sup> transporting beta 1 polypeptide	Metabolism	1.742878	0.80147
X80477	Purinergic receptor P2X, ligand-gated ion channel, 1	signal	1.758388	0.81425
M35299	Serine protease inhibitor, kanzal type 1/ Trypsin inhibitor-like protein, pancreatic	signal	3.576634	-1.8386
X61296	L1 retroposon, ORF2	?	2.112141	1.078706
AA875531	CDK110	?	2.135214	1.094381
AA866291	ESTs	?	2.488951	1.315538
AA894092	ESTs	?	2.713114	1.439949
D23676	Rat mRNA for regenerating protein III (reg III), complete cds	?	3.845138	1.943035
M36317	thyrotropin-releasing hormone (TRH) precursor	signaling	1.902185	0.927657
M83746	Proprotein convertase subtilisin/kexin type 2	Hormone metabolism	1.923154	0.943474
S40669	type 2 proinsulin processing endopeptidase=subtilisin homolog	Hormone metabolism	2.167176	1.115816
X68782	Ig heavy chain VDJ-region CH1-CH2	Immunsystem	1.811604	0.857267
AA893325	ornithine aminotransferase	Metabolism/aa	4.33315	2.115416
J05592	protein phosphatase 1, regulatory (inhibitor) subunit 1A	signaling	2.098573	1.069409
J05592	protein phosphatase 1, regulatory (inhibitor) subunit 1A	signaling	2.189179	1.13039
M98049	Pancreatitis-associated protein 1	signaling	4.826155	2.270874
M27207	alpha-1 type I collagen	structure	1.791104	0.840849
AI179399	collagen type V, alpha 2	structure	1.78154	0.833125
Y00826	nuclear pore membrane glycoprotein 210	structure	1.751504	0.808594
AI231472	procollagen, type I, alpha 1	structure	1.821409	0.865055
Z78279	procollagen, type I, alpha 1	structure	2.231755	1.158179
Z78279	procollagen, type I, alpha 1	structure	2.539813	1.344722
X70369	procollagen, type III, alpha 1	structure	1.926809	0.946214
AF004431	NK6 transcription factor related, locus 1 (Drosophila)	transcription factor	2.534562	1.341737

AF009329	Rattus norvegicus enhancer-of-split and hairy-related protein 1 (SHARP-1) mRNA, complete cds	transcription factor	1.911788	0.934922
J03179	D site albumin promoter binding protein	transcriptor factor	3.733952	1.900703
J03179	D site albumin promoter binding protein	transcriptor factor	5.327419	2.413437
AJ011811	claudin 7	structure	5.395058	2.431638
M13100	Rattus norvegicus heme oxygenase-3 (HO-3) mRNA, complete cds		2.135477	1.094559
A1169327	tissue inhibitor of metalloproteinase 1		1.980865	0.986131
M97255	trefoil factor 2 (spasmolytic protein 1)		1.826995	0.869473