

Supplemental table 10: List of genes regulated by soy diet in the anterior pituitary

A- Anterior pituitary

Gene Symbol	Gene Title	RefSeq Transcript ID	Fold change	Gene Ontology Biological Process
Up-regulated				
<i>Dusp26</i>	dual specificity phosphatase 26 (putative)	NM_001012352	2,61	protein dephosphorylation
<i>Sncg</i>	synuclein, gamma (breast cancer-specific protein 1)	NM_031688	2,16	peripheral nervous system development
<i>Tspy14</i>	TSPY-like 4	NM_001012075	1,69	nucleosome assembly
<i>Slc16a13</i>	Solute carrier family 16, member 13 (monocarboxylic acid transporter 13)	NM_001005530	1,34	transport
<i>RT1-S3</i>	RT1 class Ib, locus S3	NM_001008886	1,33	positive regulation of T cell mediated cytotoxicity
<i>Nckap1l</i>	NCK associated protein 1 like	NM_001108119	1,32	B cell homeostasis
<i>Plk5</i>	polo-like kinase 5	NM_001170557 /// XM_001076512 /// XM_234920	1,32	protein phosphorylation
<i>Rab33a</i>	RAB33A, member of RAS oncogene family	NM_001108257	1,32	small GTPase mediated signal transduction
<i>Dnmt3a</i>	DNA (cytosine-5-)-methyltransferase 3 alpha	NM_001003957 /// NM_001003958	1,31	negative regulation of transcription from RNA polymerase II promoter
<i>Hfe</i>	hemochromatosis	NM_001173434 /// NM_001173435 /// NM_053301	1,30	antigen processing and presentation of peptide antigen via MHC class
<i>Fry</i>	Furry homolog (Drosophila)	NM_001170398	1,30	
Down-regulated				
<i>Robo2</i>	roundabout, axon guidance receptor, homolog 2 (Drosophila)	NM_032106	-2,20	luteolysis
<i>Vegfa</i>	vascular endothelial growth factor A	NM_001110333 /// NM_001110334 /// NM_001110335 /// NM_001110336 /// NM_031836	-2,08	angiogenesis
<i>Fam122b</i>	family with sequence similarity 122B	NM_001166586	-2,07	
<i>Lum</i>	lumican	NM_031050	-2,06	response to organic cyclic substance
<i>Nqo2</i>	NAD(P)H dehydrogenase, quinone 2	NM_001004214	-1,99	memory
<i>Cgln1</i>	cingulin-like 1	NM_001108164	-1,75	
<i>F2r</i>	coagulation factor II (thrombin) receptor	NM_012950	-1,71	activation of MAPKK activity
<i>Cmb1</i>	carboxymethylenebutenolidase homolog (Pseudomonas)	NM_001008770	-1,66	
<i>Retsat</i>	retinol saturase (all trans retinol 13,14 reductase)	NM_145084	-1,59	retinol metabolic process
<i>Raph1</i>	Ras association (RalGDS/AF-6) and pleckstrin homology domains 1	NM_001108798	-1,58	signal transduction
<i>Sec61a2</i>	Sec61 alpha 2 subunit (S. cerevisiae)	NM_001170343	-1,57	transport
<i>Phka1</i>	Phosphorylase kinase, alpha 1	NM_022626	-1,57	carbohydrate metabolic process

<i>Ehd3</i>	EH-domain containing 3	NM_138890	-1,54	cAMP catabolic process in utero embryonic development
<i>Pde10a</i>	phosphodiesterase 10A	NM_022236	-1,54	
<i>Gja1</i>	gap junction protein, alpha 1	NM_012567	-1,53	
<i>Clec16a</i>	C-type lectin domain family 16, member A	XM_002724483 /// XM_213209	-1,51	
<i>Hrsp12</i>	heat-responsive protein 12	NM_031714	-1,47	induction of apoptosis cell adhesion cation transport proteolysis protein methylation blood vessel maturation
<i>Timp3</i>	TIMP metalloproteinase inhibitor 3	NM_012886	-1,46	
<i>Dsg2</i>	desmoglein 2	XM_001054396 /// XM_226112	-1,46	
<i>Slc41a3</i>	solute carrier family 41, member 3	NM_001037492	-1,45	
<i>Npepl1</i>	aminopeptidase-like 1	NM_001107806	-1,45	
<i>MGC72974</i>	hypothetical LOC316976	NM_198772	-1,43	
<i>Reck</i>	reversion-inducing-cysteine-rich protein with kazal motifs	NM_001107954	-1,43	
<i>H2afj</i>	H2A histone family, member J	NM_001109610	-1,42	nucleosome assembly tricarboxylic acid cycle G1 phase of mitotic cell cycle cell cycle
<i>Aco1</i>	aconitase 1, soluble	NM_017321	-1,42	
<i>Cdk1</i>	cyclin-dependent kinase 1	NM_019296	-1,41	
<i>Cks2</i>	CDC28 protein kinase regulatory subunit 2	NM_001126083	-1,40	
<i>Ttc19</i>	tetratricopeptide repeat domain 19	NM_001109644	-1,40	carbohydrate metabolic process regulation of cell growth
<i>Ganab</i>	glucosidase, alpha; neutral AB	NM_001106334	-1,39	
<i>Hsd3b7</i>	hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 7	NM_139329	-1,38	
<i>Ctps</i>	CTP synthase	NM_001134873	-1,38	pyrimidine nucleotide biosynthetic process ovulation from ovarian follicle
<i>Cbr1</i>	carbonyl reductase 1 /// inducible carbonyl reductase-like	NM_019170 /// XM_002727460 /// XM_002727863	-1,38	
<i>Syngn2</i>	synaptogyrin 2	NM_053553	-1,37	protein targeting cell morphogenesis
<i>Atp2b2</i>	ATPase, Ca++ transporting, plasma membrane 2	NM_012508	-1,36	
<i>Cbfb</i>	core-binding factor, beta subunit	NM_001013191	-1,36	ossification translation DNA replication
<i>Gfm1</i>	G elongation factor, mitochondrial 1	NM_053625	-1,36	
<i>Kctd13</i>	potassium channel tetramerisation domain containing 13	NM_198736	-1,36	
<i>Lsm12</i>	LSM12 homolog (S. cerevisiae)	NM_001105843	-1,36	regulation of cell growth
<i>Igfbp7</i>	insulin-like growth factor binding protein 7	NM_001013048	-1,35	
<i>Klc1</i>	kinesin light chain 1	NM_001081972 /// NM_001081973 /// NM_001081974	-1,35	axon cargo transport
<i>Dnajc30</i>	DnaJ (Hsp40) homolog, subfamily C, member 30	NM_001109024	-1,35	
<i>Ar</i>	androgen receptor	NM_012502	-1,35	in utero embryonic development
<i>Zfyve27</i>	zinc finger, FYVE domain containing 27	NM_199104	-1,35	
<i>Snx7</i>	sorting nexin 7	NM_001012083	-1,35	cell communication respiratory system process neuron migration protein dephosphorylation
<i>Rab3a</i>	RAB3A, member RAS oncogene family	NM_013018	-1,34	
<i>Pex7</i>	peroxisomal biogenesis factor 7	NM_001034147	-1,33	
<i>Ptpn3</i>	Protein tyrosine phosphatase, non-receptor type 3	XM_001055793 /// XM_001059757	-1,33	
<i>Pcbp3</i>	poly(rC) binding protein 3	NM_001011945	-1,32	

<i>Mtus1</i>	mitochondrial tumor suppressor 1	NM_178093	-1,32	cell cycle
<i>Cd151</i>	CD151 molecule (Raph blood group)	NM_022523	-1,32	hemidesmosome assembly
<i>Polr2g</i>	polymerase (RNA) II (DNA directed) polypeptide G	NM_053948	-1,31	transcription
<i>Vdac1</i>	voltage-dependent anion channel 1	NM_031353	-1,31	behavioral fear response
<i>Mthfd1</i>	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, methenyltetrahydrof	NM_022508	-1,30	histidine biosynthetic process
<i>Racgap1</i>	Rac GTPase-activating protein 1	NM_001108112	-1,30	cytokinesis
<i>Mcart1</i>	mitochondrial carrier triple repeat 1	NM_001024785	-1,30	transport
<i>Rbm18</i>	RNA binding motif protein 18	NM_001107838	-1,30	
<i>Mrps18a</i>	mitochondrial ribosomal protein S18A	NM_198756	-1,30	translation
<i>Znrf2</i>	zinc and ring finger 2	NM_001108628	-1,30	
<i>Fktn</i>	fukutin	NM_001108667	-1,30	
<i>Cib2</i>	calcium and integrin binding family member 2	NM_001015010	-1,30	

B-Hypothalamus

Gene Symbol	Gene Title	RefSeq Transcript ID	Fold change	Gene Ontology Biological Process
Up-regulated				
<i>Ero1l</i>	ERO1-like (S. cerevisiae)	NM_138528	1,49	protein folding
<i>Fitm2</i>	fat storage-inducing transmembrane protein 2	NM_001107799	1,48	regulation of triglyceride biosynthetic process
<i>Rexo4</i>	REX4, RNA exonuclease 4 homolog (S. cerevisiae)	NM_001033884	1,42	
<i>Tspyl4</i>	TSPY-like 4	NM_001012075	1,42	nucleosome assembly
<i>Rprd1a</i>	Regulation of nuclear pre-mRNA domain containing 1A	XM_001056597 /// XM_214609	1,39	
<i>Myst3</i>	MYST histone acetyltransferase (monocytic leukemia) 3	NM_001100570	1,38	nucleosome assembly
<i>Tmem144</i>	transmembrane protein 144	NM_001108551	1,37	
<i>Cit</i>	Citron	NM_001029911	1,35	mitotic sister chromatid segregation
<i>Pdyn</i>	prodynorphin	NM_019374	1,34	neuropeptide signaling pathway
<i>Pop5</i>	Processing of precursor 5, ribonuclease P/MRP subunit (S. cerevisiae)	NM_001105752	1,33	tRNA processing
<i>Nf1</i>	neurofibromin 1	NM_012609	1,31	MAPKKK cascade
<i>Susd2</i>	sushi domain containing 2	NM_001106381	1,30	immune response
Down-regulated				
<i>Coq10b</i>	coenzyme Q10 homolog B (S. cerevisiae)	NM_001009671	-1,31	

<i>Ston2</i>	Stonin 2	NM_001135874	-1,39	intracellular protein transport
<i>Tnnc2</i>	troponin C type 2 (fast)	NM_001037351	-1,41	skeletal muscle contraction
<i>Fmod</i>	fibromodulin	NM_080698	-1,47	wound healing
<i>RT1-EC2</i>	RT1 class Ib, locus EC2	NM_012645	-1,49	antigen processing and presentation of peptide antigen via MHC class

* *P* value = 0.029, was obtained by permutation analysis. Fold change ≥ 1.3 .