Supplemental table 6: List of genes regulated by LTMCR in the anterior pituitary

Gene Symbol	Gene Title	RefSeq Transcript ID	Fold change	Gene Ontology Biological Process
Up-regulated				
Sncg	synuclein, gamma (breast cancer-specific protein 1)	NM_031688	**3,11**	peripheral nervous system development
Pcdh10	protocadherin 10	XM_001054521 /// XM_342242	**2,45**	cell adhesion
Per2	period homolog 2 (Drosophila)	NM_031678	**2,07**	transcription
Hspa1a /// Hspa1b	heat shock 70kD protein 1A /// heat shock 70kD protein 1B (mapped)	NM_031971 /// NM_212504	**1,79**	telomere maintenance
Dnajb1	DnaJ (Hsp40) homolog, subfamily B, member 1	NM_001108441	**1,67**	protein folding
Chordc1	cysteine and histidine-rich domain (CHORD)-containing 1	NM_001108128	**1,67**	
Usp2	ubiquitin specific peptidase 2	NM_053774	**1,64**	negative regulation of transcription from RNA polymerase II promoter
Adamtsl4	ADAMTS-like 4	NM_001034012	**1,61**	apoptosis
Lrrn3	leucine rich repeat neuronal 3	NM_030856	**1,58**	positive regulation of protein phosphorylation
Plk5	polo-like kinase 5	NM_001170557 /// XM_001076512 /// XM_234920	**1,47**	protein phosphorylation
Dnase1	deoxyribonuclease I	NM_013097	**1,45**	DNA catabolic process
Nr1d2	nuclear receptor subfamily 1, group D, member 2	NM_147210	**1,44**	transcription
Hgfac	hepatocyte growth factor activator	NM_053320	**1,43**	proteolysis
Fkbp14	FK506 binding protein 14	NM_001013210	**1,42**	protein folding
Tef	thyrotrophic embryonic factor	NM_019194	**1,41**	transcription
Rbm3	RNA binding motif (RNP1, RRM) protein 3	NM_053696	**1,39**	translation
Jam2	junctional adhesion molecule 2	NM_001034004	**1,38**	
Bhlhe41	basic helix-loop-helix family, member e41	XM_001074956 /// XM_002729454	**1,37**	transcription
Dnaja1	DnaJ (Hsp40) homolog, subfamily A, member 1	NM_022934	**1,35**	protein folding
Hla-e	Major histocompatibility complex class I E	NM_001008886	**1,35**	positive regulation of T cell mediated cytotoxicity
Myh6	myosin, heavy chain 6, cardiac muscle, alpha	NM_017239	**1,35**	response to reactive oxygen species
Syncrip	Synaptotagmin binding, cytoplasmic RNA interacting protein	NM_001047916	**1,34**	mRNA processing
Klf6	Kruppel-like factor 6	NM_031642	**1,34**	transcription
Cacybp	calcyclin binding protein	NM_001004208	**1,34**	heart development
Avil	advillin	NM_024401	**1,34**	cytoskeleton organization

Wee1	wee 1 homolog (S. pombe)	NM_001012742	**1,34**	protein phosphorylation
Birc3	baculoviral IAP repeat-containing 3	NM_023987	**1,33**	anti-apoptosis
Mettl7a	methyltransferase like 7A	NM_001037355	**1,32**	metabolic process
Tpsb2	tryptase beta 2	NM_019180	**1,31**	proteolysis
H13	histocompatibility 13	NM_001107789	**1,31**	
Cry2	cryptochrome 2 (photolyase-like)	NM_133405	**1,30**	DNA repair
Jph3	junctophilin 3	NM_001107437	**1,30**	locomotion

Down-regulated

Igfbp3	insulin-like growth factor binding protein 3	NM_012588	**-2,33**	regulation of cell growth
Nupr1	nuclear protein, transcriptional regulator, 1	NM_053611	**-1,93**	acute inflammatory response
Fam171a1 /// LOC684862	family with sequence similarity 171, member A1 /// hypothetical protein LOC68486	XM_001056358 /// XM_001072231	**-1,93**	
Lix1	Lix1 homolog (chicken)	NM_001106214	**-1,92**	
Serping1	serine (or cysteine) peptidase inhibitor, clade G, member 1	NM_199093	**-1,76**	negative regulation of complement activation, lectin pathway
F2r	coagulation factor II (thrombin) receptor	NM_012950	**-1,76**	activation of MAPKK activity
Ptp4a3	protein tyrosine phosphatase 4a3	NM_001114405	**-1,74**	protein dephosphorylation
Cmbl	carboxymethylenebutenolidase homolog (Pseudomonas)	NM_001008770	**-1,74**	
Syn2	synapsin II	NM_001034020 /// NM_019159	**-1,73**	neurotransmitter secretion
Xdh	xanthine dehydrogenase	NM_017154	**-1,70**	lactation
Chrnb4	cholinergic receptor, nicotinic, beta 4	NM_052806	**-1,68**	regulation of action potential
Aqp4	aquaporin 4	NM_001142366 /// NM_012825	**-1,65**	transport
Arsb	arylsulfatase B	NM_033443	**-1,64**	autophagy
B4galt4	UDP-Gal:betaGlcNAc beta 1,4-galactosyltransferase, polypeptide 4	NM_001012018	**-1,64**	carbohydrate metabolic process
Pigt	phosphatidylinositol glycan anchor biosynthesis, class T	NM_001106540	**-1,61**	attachment of GPI anchor to protein
Tmem98	transmembrane protein 98	NM_001007672	**-1,57**	
Aqp1	aquaporin 1	NM_012778	**-1,55**	glomerular filtration
Arntl	aryl hydrocarbon receptor nuclear translocator-like	NM_024362	**-1,51**	protein import into nucleus, translocation
Retsat	retinol saturase (all trans retinol 13,14 reductase)	NM_145084	**-1,50**	retinol metabolic process
Cbr1 /// LOC100360507	carbonyl reductase 1 /// inducible carbonyl reductase-like	NM_019170 /// XM_002727460 /// XM_002727863	**-1,50**	ovulation from ovarian follicle
Slc43a2	solute carrier family 43, member 2	NM_001105812	**-1,47**	amino acid transmembrane transport
Carhsp1	calcium regulated heat stable protein 1	NM_152790	**-1,47**	regulation of transcription, DNA-dependent
H2afj	H2A histone family, member J	NM_001109610	**-1,46**	nucleosome assembly
Glrx1	glutaredoxin 1	NM_022278	**-1,45**	transport

Pvrl2	poliovirus receptor-related 2	NM_001012064	**-1,44**	positive regulation of natural killer cell mediated cytotoxicity dire
Tspan8	tetraspanin 8	NM_133526	**-1,44**	negative regulation of blood coagulation
Slco3a1	Solute carrier organic anion transporter family, member 3a1	NM_177481	**-1,44**	transport
Emcn	endomucin	NM_001004228	**-1,43**	angiogenesis
Flnb	filamin, beta	NM_001107288	**-1,43**	skeletal muscle tissue development
Eid2b	EP300 interacting inhibitor of differentiation 2B	XM_002725600 /// XM_574407	**-1,40**	
Trappc6a	trafficking protein particle complex 6A	NM_001109410	**-1,40**	cGMP biosynthetic process
Myh14	myosin, heavy chain 14	NM_001100690	**-1,39**	ATP catabolic process
Nup93	nucleoporin 93	NM_001011925	**-1,39**	transport
Sts	steroid sulfatase	NM_012661	**-1,38**	lipid metabolic process
Kazald1	Kazal-type serine peptidase inhibitor domain 1	NM_001033064	**-1,38**	regulation of cell growth
Tfpi	tissue factor pathway inhibitor (lipoprotein-associated coagulation inhibitor)	NM_001177321 /// NM_017200	**-1,38**	blood coagulation
Slc20a2	solute carrier family 20 (phosphate transporter), member 2	NM_017223	**-1,38**	transport
Klc1	kinesin light chain 1	NM_001081972 /// NM_001081973 /// NM_001081974	**-1,37**	axon cargo transport
Glrx5	glutaredoxin 5	NM_001108722	**-1,37**	cell redox homeostasis
Ehd3	EH-domain containing 3	NM_138890	**-1,37**	
Nfs1	NFS1 nitrogen fixation 1 homolog (S. cerevisiae)	NM_053462	**-1,35**	cysteine metabolic process
Cenpb	centromere protein B	XM_001081194 /// XM_342521	**-1,35**	regulation of transcription
Bend5	BEN domain containing 5	NM_001108672	**-1,35**	
Chchd6	coiled-coil-helix-coiled-coil-helix domain containing 6	NM_001106608	**-1,35**	
Thumpd3	THUMP domain containing 3	NM_001170546 /// NM_001170547 /// NM_001170548 /// XM_001078607 /// XM_575638	**-1,35**	
Rrm1	ribonucleotide reductase M1	NM_001013236	**-1,35**	DNA replication
Csgalnact1	chondroitin sulfate N-acetylgalactosaminyltransferase 1	NM_001107309	**-1,34**	UDP-N-acetylgalactosamine metabolic process
Slc41a3	solute carrier family 41, member 3	NM_001037492	**-1,34**	cation transport
Gaa	glucosidase, alpha, acid	NM_199118	**-1,33**	angiogenesis
Pigy	phosphatidylinositol glycan anchor biosynthesis, class Y	NM_001024370	**-1,33**	GPI anchor biosynthetic process
Pfkp	phosphofructokinase, platelet	NM_206847	**-1,33**	fructose 6-phosphate metabolic process
Cip98	CASK-interacting protein CIP98	NM_181088	**-1,33**	retina homeostasis

Galm	galactose mutarotase (aldose 1-epimerase)	NM_001007704	**-1,33**	carbohydrate metabolic process
Tfrc	transferrin receptor	NM_022712	**-1,33**	response to hypoxia
Bat3	HLA-B-associated transcript 3	NM_001033968 /// NM_053609	**-1,33**	regulation of cell proliferation
Pdhx	Pyruvate dehydrogenase complex, component X	NM_001044242	**-1,33**	metabolic process
Polr2l	polymerase (RNA) II (DNA directed) polypeptide L	NM_001143911	**-1,33**	transcription, DNA-dependent
Prr13	proline rich 13	NM_001008379	**-1,33**	transcription
Aloxe3	arachidonate lipoxygenase 3	NM_001105793	**-1,33**	leukotriene metabolic process
Mrpl21	mitochondrial ribosomal protein L21	NM_001107567	**-1,32**	translation
G3bp1	GTPase activating protein (SH3 domain) binding protein 1	NM_133565	**-1,32**	transport
Adck5	aarF domain containing kinase 5	NM_001135798	**-1,32**	
Mrps18a	mitochondrial ribosomal protein S18A	NM_198756	**-1,32**	translation
Thy1	Thy-1 cell surface antigen	NM_012673	**-1,32**	angiogenesis
Lgals3bp	lectin, galactoside-binding, soluble, 3 binding protein	NM_139096	**-1,32**	cell adhesion
Bat5	HLA-B associated transcript 5	NM_212531	**-1,32**	
Aig1	androgen-induced 1	NM_001134425	**-1,32**	
Elmo2	engulfment and cell motility 2	NM_001134955	**-1,32**	phagocytosis
Cd151	CD151 molecule (Raph blood group)	NM_022523	**-1,32**	hemidesmosome assembly
Ppp1r10	protein phosphatase 1, regulatory subunit 10	NM_022951	**-1,31**	transcription
Camk2d	calcium/calmodulin-dependent protein kinase II delta	NM_012519	**-1,31**	G1/S transition of mitotic cell cycle
Mcts2	malignant T cell amplified sequence 2	XM_001071410 /// XM_002726252	**-1,31**	
Bola3	bolA homolog 3 (E. coli)	NM_001106601	**-1,31**	
Atp5s	ATP synthase, H+ transporting, mitochondrial F0 complex, subunit s (factor B)	NM_001007749	**-1,31**	ATP biosynthetic process
Mgea5	meningioma expressed antigen 5 (hyaluronidase)	NM_131904	**-1,31**	N-acetylglucosamine metabolic process
Shbg	sex hormone binding globulin	NM_012650	**-1,31**	primary spermatocyte growth
Gmpr	guanosine monophosphate reductase	NM_057188	**-1,30**	metabolic process
Laptm4b	lysosomal protein transmembrane 4 beta	NM_001013174	**-1,30**	transport
Sorcs2	sortilin-related VPS10 domain containing receptor 2	NM_001107225	**-1,30**	
Taf10	TAF10 RNA polymerase II, TATA box binding protein (TBP)-associated factor	NM_001134735	**-1,30**	G1/S transition of mitotic cell cycle
Asns	asparagine synthetase	NM_013079	**-1,30**	liver development

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