

**Supplemental table 9: List of genes regulated by LTMCR in the hypothalamus**

Gene Symbol	Gene Title	RefSeq Transcript ID	Fold change	Gene Ontology Biological Process
<b>Up-regulated</b>				
<i>RT1-N1</i> /// <i>RT1-N2</i>	RT1 class Ib, locus N1 /// RT1 class Ib, locus N2	NM_001008854 /// NM_012646	<b>2,18</b>	immune response
<i>Nr4a3</i>	nuclear receptor subfamily 4, group A, member 3	NM_017352 /// NM_031628	<b>1,69</b>	mesoderm formation
<i>Hspa1a</i> /// <i>Hspa1b</i>	heat shock 70kD protein 1A /// heat shock 70kD protein 1B (mapped)	NM_031971 /// NM_212504	<b>1,56</b>	telomere maintenance
<i>Hspa1a</i>	heat shock 70kD protein 1A	NM_031971	<b>1,56</b>	telomere maintenance
<i>Fkbp5</i>	FK506 binding protein 5	NM_001012174	<b>1,49</b>	protein folding
<i>Gas2</i>	growth arrest-specific 2	NM_001127504	<b>1,49</b>	cell cycle arrest
<i>Tpr</i>	translocated promoter region	NM_001107185	<b>1,48</b>	translation
<i>DnaJ3</i>	DnaJ (Hsp40) homolog, subfamily A, member 3	NM_001038595 /// NM_001038596	<b>1,48</b>	mitochondrial DNA replication
<i>Osgp</i>	O-sialoglycoprotein endopeptidase	NM_001100510	<b>1,47</b>	proteolysis
<i>Zbtb20</i>	zinc finger and BTB domain containing 20	NM_001105880	<b>1,47</b>	
<i>RT1-T24-3</i>	RT1 class I, locus T24, gene 3	NM_001166403	<b>1,43</b>	immune response
<i>Per2</i>	period homolog 2 (Drosophila)	NM_031678	<b>1,43</b>	transcription
<i>Rbm3</i>	RNA binding motif (RNP1, RRM) protein 3	NM_053696	<b>1,41</b>	translation
<i>Afmid</i>	arylformamidase	NM_001111366	<b>1,40</b>	metabolic process
<i>Cry1</i>	cryptochrome 1 (photolyase-like)	NM_198750	<b>1,40</b>	DNA repair
<i>Gpatch4</i>	G patch domain containing 4	NM_001024979	<b>1,38</b>	
<i>Ppp1r15b</i>	protein phosphatase 1, regulatory (inhibitor) subunit 15b	NM_001107175	<b>1,36</b>	response to stress
<i>Egr2</i>	early growth response 2	NM_053633	<b>1,35</b>	transcription
<i>Pdlim5</i>	PDZ and LIM domain 5	NM_053326	<b>1,35</b>	heart development
<i>Casp8</i>	caspase 8	NM_022277	<b>1,35</b>	angiogenesis
<i>Tmem144</i>	transmembrane protein 144	NM_001108551	<b>1,34</b>	
<i>Tle1</i>	transducin-like enhancer of split 1 (E(sp1) homolog, Drosophila)	NM_001173433 /// XM_001066887 /// XM_002726541 /// XM_002726542 /// XM_002726543	<b>1,34</b>	negative regulation of transcription from RNA polymerase II promoter
<i>Myst3</i>	MYST histone acetyltransferase (monocytic leukemia) 3	NM_001100570	<b>1,34</b>	nucleosome assembly
<i>Otud7b</i>	OTU domain containing 7B	NM_001107697	<b>1,34</b>	protein deubiquitination
<i>Calcl</i>	calcitonin receptor-like	NM_012717	<b>1,34</b>	regulation of muscle contraction
<i>Nhlrc3</i>	NHL repeat containing 3	XM_001054658 /// XM_227139	<b>1,33</b>	
<i>Gna14</i>	guanine nucleotide binding protein, alpha 14	NM_001013151	<b>1,33</b>	protein ADP-ribosylation
<i>Cd1d1</i>	CD1d1 molecule	NM_017079	<b>1,32</b>	positive regulation of T cell mediated cytotoxicity
<i>Syt6</i>	synaptotagmin VI	NM_022191	<b>1,32</b>	transport
<i>Pla2g3</i>	phospholipase A2, group III	NM_001106015	<b>1,32</b>	phospholipid metabolic process
<i>Camk1g</i>	calcium/calmodulin-dependent protein kinase IG	NM_182842	<b>1,31</b>	protein phosphorylation
<i>Wfdc6a</i>	WAP four-disulfide core domain 6A	XM_001062561 /// XM_002726295	<b>1,31</b>	
<i>Tctn3</i>	tectonic family member 3	XM_001053561 /// XM_220007	<b>1,31</b>	
<i>Yy1</i>	YY1 transcription factor	NM_173290	<b>1,31</b>	regulation of transcription, DNA-dependent
<i>Prpf38b</i>	PRP38 pre-mRNA processing factor 38 (yeast) domain containing B	NM_001024305	<b>1,30</b>	mRNA processing

## Down-regulated

<i>Irf2</i>	interferon regulatory factor 2	NM_001047086	<b>-1,30</b>	regulation of transcription, DNA-dependent
<i>Apoa1</i>	apolipoprotein A-I	NM_012738	<b>-1,31</b>	regulation of protein phosphorylation
<i>Cartpt</i>	CART prepropeptide	NM_017110	<b>-1,33</b>	activation of MAPKK activity
<i>Tgm2</i>	transglutaminase 2, C polypeptide	NM_019386	<b>-1,33</b>	blood vessel remodeling
<i>Lmf1</i>	lipase maturation factor 1	XM_001060521 /// XM_340769	<b>-1,35</b>	protein secretion
<i>Vcan</i>	versican	NM_001170558 /// NM_001170559 /// NM_001170560 /// NM_053663 /// XM_001058357 //	<b>-1,36</b>	ureteric bud development
<i>Nr1d1</i>	nuclear receptor subfamily 1, group D, member 1	NM_001113422 /// NM_145775	<b>-1,38</b>	transcription
<i>Opalin</i>	oligodendrocytic myelin paranodal and inner loop protein	NM_001017386	<b>-1,41</b>	
<i>Htra3</i>	HtrA serine peptidase 3	XM_001058037 /// XM_341237	<b>-1,44</b>	regulation of cell growth
<i>Nov</i>	nephroblastoma overexpressed gene	NM_030868	<b>-1,51</b>	regulation of cell growth
<i>Matn2</i>	matrilin 2	XM_001058523 /// XM_216941	<b>-1,62</b>	
<i>Vof16</i>	ischemia related factor vof-16	NM_147207	<b>-2,25</b>	

\* *P* value = 0.029, was obtained by permutation analysis. Fold change  $\geq 1.3$ .