

Product datasheet for **MR211518L4V**

Atp2a2 (NM_001110140) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Atp2a2 (NM_001110140) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Atp2a2
Synonyms:	9530097L16Rik; D5Wsu150e; mKIAA4195; SERCA2; Serca2a; SERCA2B
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_001110140
ORF Size:	3132 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR211518).
OTI Disclaimer:	The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. More info
OTI Annotation:	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
RefSeq:	NM_001110140.3 , NP_001103610.1
RefSeq Size:	4565 bp
RefSeq ORF:	3135 bp
Locus ID:	11938
UniProt ID:	O55143
Cytogenetics:	5 F



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Gene Summary:

This magnesium-dependent enzyme catalyzes the hydrolysis of ATP coupled with the translocation of calcium from the cytosol to the sarcoplasmic reticulum lumen. Isoform SERCA2A is involved in the regulation of the contraction/relaxation cycle. Acts as a regulator of TNFSF11-mediated Ca(2+) signaling pathways via its interaction with TMEM64 which is critical for the TNFSF11-induced CREB1 activation and mitochondrial ROS generation necessary for proper osteoclast generation. Association between TMEM64 and SERCA2 in the ER leads to cytosolic Ca (2+) spiking for activation of NFATC1 and production of mitochondrial ROS, thereby triggering Ca (2+) signaling cascades that promote osteoclast differentiation and activation (PubMed:23395171).[UniProtKB/Swiss-Prot Function]