

Product datasheet for **MR218237L4V**

Eprs (NM_029735) Mouse Tagged ORF Clone Lentiviral Particle

Product data:

Product Type:	Lentiviral Particles
Product Name:	Eprs (NM_029735) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Eprs
Synonyms:	2410081F06Rik; 3010002K18Rik; C79379; Qprs
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_029735
ORF Size:	4536 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR218237).
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_029735.1
RefSeq Size:	4850 bp
RefSeq ORF:	4539 bp
Locus ID:	107508
UniProt ID:	Q8CGC7
Cytogenetics:	1 H5



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Gene Summary:

Multifunctional protein which is primarily part of the aminoacyl-tRNA synthetase multienzyme complex, also known as multisynthetase complex, that catalyzes the attachment of the cognate amino acid to the corresponding tRNA in a two-step reaction: the amino acid is first activated by ATP to form a covalent intermediate with AMP and is then transferred to the acceptor end of the cognate tRNA (By similarity). The phosphorylation of EPRS, induced by interferon-gamma, dissociates the protein from the aminoacyl-tRNA synthetase multienzyme complex and recruits it to the GAIT complex that binds to stem loop-containing GAIT elements in the 3' UTR of diverse inflammatory mRNAs (such as ceruplasmin), suppressing their translation. Interferon-gamma can therefore redirect, in specific cells, the EPRS function from protein synthesis to translation inhibition (PubMed:23071094). Also functions as an effector of the mTORC1 signaling pathway by promoting, through SLC27A1, the uptake of long-chain fatty acid by adipocytes. Thereby, it also plays a role in fat metabolism and more indirectly influences lifespan (PubMed:28178239).[UniProtKB/Swiss-Prot Function]