

## Product datasheet for **MR222730L4V**

### Epm2a (NM\_010146) Mouse Tagged ORF Clone Lentiviral Particle

#### Product data:

Product Type:	Lentiviral Particles
Product Name:	Epm2a (NM_010146) Mouse Tagged ORF Clone Lentiviral Particle
Symbol:	Epm2a
Synonyms:	TcrbK)TG-BFlv; Tg(TcraK; TG-B
Mammalian Cell Selection:	Puromycin
Vector:	pLenti-C-mGFP-P2A-Puro (PS100093)
Tag:	mGFP
ACCN:	NM_010146
ORF Size:	990 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(MR222730).
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. <a href="#">More info</a>
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:	<a href="#">NM_010146.2</a> , <a href="#">NP_034276.2</a>
RefSeq Size:	1079 bp
RefSeq ORF:	993 bp
Locus ID:	13853
UniProt ID:	<a href="#">Q9WUA5</a>
Cytogenetics:	10 A1



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**Gene Summary:**

Plays an important role in preventing glycogen hyperphosphorylation and the formation of insoluble aggregates, via its activity as glycogen phosphatase, and by promoting the ubiquitination of proteins involved in glycogen metabolism via its interaction with the E3 ubiquitin ligase NHLRC1/malin (PubMed:18040046, PubMed:18852261, PubMed:19036738, PubMed:23663739, PubMed:24430976, PubMed:24068615). Dephosphorylates phosphotyrosine and synthetic substrates, such as para-nitrophenylphosphate (pNPP), and has low activity with phosphoserine and phosphothreonine substrates (in vitro) (PubMed:16971387, PubMed:24430976). Has also been shown to dephosphorylate MAPT (PubMed:19542233). Shows strong phosphatase activity towards complex carbohydrates in vitro, avoiding glycogen hyperphosphorylation which is associated with reduced branching and formation of insoluble aggregates (PubMed:18040046, PubMed:18852261, PubMed:23663739). Forms a complex with NHLRC1/malin and HSP70, which suppresses the cellular toxicity of misfolded proteins by promoting their degradation through the ubiquitin-proteasome system (UPS) (PubMed:19036738, PubMed:24068615). Acts as a scaffold protein to facilitate PPP1R3C/PTG ubiquitination by NHLRC1/malin. Also promotes proteasome-independent protein degradation through the macroautophagy pathway (PubMed:20453062). [UniProtKB/Swiss-Prot Function]