

## Product datasheet for **RC223540L2V**

### Myosin Phosphatase (PPP1R12A) (NM\_002480) Human Tagged ORF Clone Lentiviral Particle

#### Product data:

Product Type:	Lentiviral Particles
Product Name:	Myosin Phosphatase (PPP1R12A) (NM_002480) Human Tagged ORF Clone Lentiviral Particle
Symbol:	Myosin Phosphatase
Synonyms:	GUBS; M130; MBS; MYPT1
Mammalian Cell Selection:	None
Vector:	pLenti-C-mGFP (PS100071)
Tag:	mGFP
ACCN:	NM_002480
ORF Size:	3132 bp
ORF Nucleotide Sequence:	The ORF insert of this clone is exactly the same as(RC223540).
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_002480.1</a>
RefSeq Size:	4613 bp
RefSeq ORF:	3093 bp
Locus ID:	4659
UniProt ID:	<a href="#">O14974</a>
Cytogenetics:	12q21.2-q21.31
Domains:	ANK
Protein Families:	Druggable Genome



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<b>Protein Pathways:</b>	Focal adhesion, Long-term potentiation, Regulation of actin cytoskeleton, Vascular smooth muscle contraction
<b>MW:</b>	117 kDa
<b>Gene Summary:</b>	<p>Myosin phosphatase target subunit 1, which is also called the myosin-binding subunit of myosin phosphatase, is one of the subunits of myosin phosphatase. Myosin phosphatase regulates the interaction of actin and myosin downstream of the guanosine triphosphatase Rho. The small guanosine triphosphatase Rho is implicated in myosin light chain (MLC) phosphorylation, which results in contraction of smooth muscle and interaction of actin and myosin in nonmuscle cells. The guanosine triphosphate (GTP)-bound, active form of RhoA (GTP.RhoA) specifically interacted with the myosin-binding subunit (MBS) of myosin phosphatase, which regulates the extent of phosphorylation of MLC. Rho-associated kinase (Rho-kinase), which is activated by GTP. RhoA, phosphorylated MBS and consequently inactivated myosin phosphatase. Overexpression of RhoA or activated RhoA in NIH 3T3 cells increased phosphorylation of MBS and MLC. Thus, Rho appears to inhibit myosin phosphatase through the action of Rho-kinase. Several transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jan 2009]</p>