

## Product datasheet for **TR310238**

### Myosin Phosphatase (PPP1R12A) Human shRNA Plasmid Kit (Locus ID 4659)

#### Product data:

Product Type:	shRNA Plasmids
Product Name:	Myosin Phosphatase (PPP1R12A) Human shRNA Plasmid Kit (Locus ID 4659)
Locus ID:	4659
Synonyms:	GUBS; M130; MBS; MYPT1
Vector:	pRS (TR20003)
E. coli Selection:	Ampicillin
Mammalian Cell Selection:	Puromycin
Format:	Retroviral plasmids
Components:	PPP1R12A - Human, 4 unique 29mer shRNA constructs in retroviral untagged vector(Gene ID = 4659). 5µg purified plasmid DNA per construct 29-mer scrambled shRNA cassette in pRS Vector, TR30012, included for free.
RefSeq:	<a href="#">NM_001143885</a> , <a href="#">NM_001143886</a> , <a href="#">NM_001244990</a> , <a href="#">NM_001244992</a> , <a href="#">NM_002480</a> , <a href="#">NM_002480.1</a> , <a href="#">NM_002480.2</a> , <a href="#">NM_001143885.1</a> , <a href="#">NM_001143886.1</a> , <a href="#">NM_001244992.1</a> , <a href="#">NM_001244990.1</a> , <a href="#">BC111752</a> , <a href="#">BC000812</a> , <a href="#">BC013941</a> , <a href="#">BC040375</a> , <a href="#">BC047898</a> , <a href="#">BC062560</a> , <a href="#">BC092481</a>
UniProt ID:	<a href="#">O14974</a>
Summary:	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]



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<b>shRNA Design:</b>	These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact <a href="mailto:techsupport@origene.com">techsupport@origene.com</a> . If you need a special design or shRNA sequence, please utilize our <a href="#">custom shRNA service</a> .
<b>Performance Guaranteed:</b>	<p>OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.</p> <p>For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at <a href="mailto:techsupport@origene.com">techsupport@origene.com</a>. Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).</p>