

## Recombinant Human PPP1R12A protein, MYC/DDK-tagged

Cat. No. PPP1R12A-2947H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	Recombinant Human PPP1R12A, transcript variant 1, fused with MYC/DDK tag at C-terminal was expressed in HEK293.
<b>Species</b>	Human
<b>Source</b>	HEK293
<b>Description</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.</p>
<b>Form</b>	25 mM Tris.HCl, pH 7.3, 100 mM glycine, 10% glycerol.

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<b>Molecular Mass</b>	115.1 kDa
<b>Purity</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Notes</b>	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
<b>Concentration</b>	>50 ug/mL as determined by microplate BCA method
<b>GENE INFORMATION</b>	
<b>Gene Name</b>	PPP1R12A protein phosphatase 1, regulatory subunit 12A [ Homo sapiens ]
<b>Official Symbol</b>	PPP1R12A
<b>Synonyms</b>	PPP1R12A; protein phosphatase 1, regulatory subunit 12A; MYPT1, protein phosphatase 1, regulatory (inhibitor) subunit 12A; protein phosphatase 1 regulatory subunit 12A; M130; MBS; myosin binding subunit; myosin phosphatase targeting subunit 1; myosin phosphatase, target subunit 1; myosin phosphatase-targeting subunit 1; protein phosphatase myosin-binding subunit; protein phosphatase 1, regulatory (inhibitor) subunit 12A; MYPT1; MGC133042;
<b>Gene ID</b>	4659
<b>mRNA Refseq</b>	NM_002480
<b>Protein Refseq</b>	NP_002471
<b>MIM</b>	602021
<b>UniProt ID</b>	O14974

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<b>Chromosome Location</b>	12q15-q21
<b>Pathway</b>	Focal Adhesion, organism-specific biosystem; Focal adhesion, organism-specific biosystem; Focal adhesion, conserved biosystem; Long-term potentiation, organism-specific biosystem; Long-term potentiation, conserved biosystem; PLK1 signaling events, organism-specific biosystem; Regulation of Actin Cytoskeleton, organism-specific biosystem;
<b>Function</b>	14-3-3 protein binding; phosphatase regulator activity; phosphatase regulator activity; phosphoprotein phosphatase activity; protein binding; protein kinase binding; signal transducer activity;

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