

## Recombinant Human PPP1R12A Protein, Myc/DDK-tagged, C13 and N15-labeled

Cat. No. PPP1R12A-5264H Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	PPP1R12A MS Standard C13 and N15-labeled recombinant protein (NP_001137357) with a C-terminal MYC/DDK tag, was expressed in HEK293 cells.
<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>Molecular Mass</b>	115.1 kDa

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**AA Sequence**

MKMADAKQKRNEQLKRWIGSETDLEPPVVKRQKTKVKFDDGAVFLAACSSGDTDE  
 VLKLLHRGADINYANVDGLTALHQACIDNNDVMVKFLVENGANINQPDNEGWIPLHA  
 AASCGYLDIAEFLIGQGAHVAVNSEGDTPLDIAEEEEAMEELLQNEVNRQGV DIEAA  
 RKEEERIMLRDARQWLNHSGHINDVRHAKSGGTALHVA AAKGYTEVLKLLIQAGYDV  
 NIKDYDGWTPHAAAHWGKEEACRILVDNLCDMEMVNKVGQTAFDVADEDILGYLE  
 ELQKKQNLHSEKRDKKSPLIESTANMDNNQSQKTFKNKETLIEPEKNASRIESLEQ  
 EKVDEEEEGKKDESSCSSEDEEDDSESEAETDKTKPLASVTNANTSSTQAAPVAV  
 TTPTVSSGQATPTSPIKKFPTTATKISPKEEERKDESPATWRLGLRKTGSYGALAEIT  
 ASKEGQKEKDTAGVTRSASSPRLSSSLDNKEKEKDSKGTRELAYVAPTIPRRLASTSD  
 IEEKENRDSSSLRTSSSYTRRKWEDDLKKNSSVNEGSTYHKSCSFGRRQDDLSSS  
 VPSTTSTPTVTSAAAGLQKSLSSSTSTTTKITTGSSSAGTQSSTSNRLWAEDSTEKEK  
 DSVPTAVTIPVAPTVVNA AASTTTLT TTTTAGTVSSTTEVRERRRSYLT PVRDEESESQ  
 RKARSRQARQSRRSTQGVTLTDLQEA EKTIGRSRSTR TREQENEEKEKEEKEKQDK  
 EKQEEKKESETSREDEYKQKYSRTYDETYQRYRPVSTSSSTPSSSLSTMSSSLYA  
 SSQLNRPNSLVGITSAYSRGITKENEREGEKREEEKEGEDKSQPKSIRERRRRPREKR  
 RSTGVSFWTQDSDENEQEQQSDTEEGSNKKTQTDSISRYETSST SAGDRYDSL  
 GRSGSYSYLEERKPYSSRLEKDDSTDFKKLYEQILAENEK LKAQLHDTNMELTDLKL  
 QLEKATQRQERFADRSLLEMEKRERRALERRISEMEEELKMLPDLKADNQLK DEN  
 GALIRVISKLSKTRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Purity** > 80% as determined by SDS-PAGE and Coomassie blue staining

**Stability** Stable for 3 months from receipt of products under proper storage and handling conditions.

**Storage** Store at -80 centigrade. Avoid repeated freeze-thaw cycles.

**Concentration** 50 µg/mL as determined by BCA

**Storage Buffer** 100 mM glycine, 25 mM Tris-HCl, pH 7.3.

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## GENE INFORMATION

**Gene Name** [PPP1R12A protein phosphatase 1 regulatory subunit 12A \[ Homo sapiens \(human\) \]](#)

**Official Symbol** [PPP1R12A](#)

**Synonyms** [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;

**Gene ID** [4659](#)

**mRNA Refseq** [NM\\_001143885](#)

**Protein Refseq** [NP\\_001137357](#)

**MIM** [602021](#)

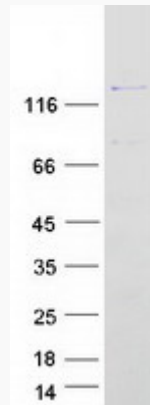
**UniProt ID** [O14974](#)

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**SDS-PAGE**



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