

## Product datasheet for **TP323540M**

### Myosin Phosphatase (PPP1R12A) (NM\_002480) Human Recombinant Protein

#### Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant protein of human protein phosphatase 1, regulatory (inhibitor) subunit 12A (PPP1R12A), transcript variant 1, 100 µg
Species:	Human
Expression Host:	HEK293T
Expression cDNA Clone or AA Sequence:	>RC223540 representing NM_002480 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)

MKMADAKQKRNEQLKRWIGSETDLEPPVVKRQTKVKFDDGAVFLAACSSGDTDEVLLKLLHRGADINYAN  
VDGLTALHQACIDDNVD MVKFLVENGANINQPDNEGWIPLHAAASCGYLDIAEFLIGQGAHVGVAVNSEGD  
TPLDIAEEEAAMEELLQNEVNRQGVDIEAARKEEERIMLRDARQWLNSGHINDVRHAKSGGTALHVAAGK  
YTEVLKLLIQAGYDVNIKDYDGWTPHAAAHWGKEEACRILVDNLCDMEMVNKVGQTAFDVADEDILGYL  
EELQKKQNLHSEKRDKKSPLIESTANMDNNQSQKTFKNKETLIIPEKNASRIESLEQEKVDEEEEGKK  
DESSCSSEDEEDDSESEAETDKTKPLASVTNANTSSTQAAPVAVTTPTVSSGQATPTSPIKKFPTTATK  
ISPKEEERKDESPATWRLGLRKTGSYGALAEITASKEGQKEKDTAGVTRSASSPRLSSSLDNKEKEKDSK  
GTRLAYVAPTIPRRLASTSDIEEKENRDSSSLRTSSSYTRRKWEDDLKKNSSVNEGSTYHKSCSFGRRQD  
DLISSVPTTSTPTVTSAAAGLQKLSSTSTTTKITTGSSSAGTQSSTSNRLWAEDSTEKEKDSVPTAV  
TIPVAPTWNAAASTTTTLLTTTAGTVSSTTEVRERRRSYLTVPVRDEESESQRKARSQARQSRSTQGV  
LTDLQEAektIGRSRSTRREQENEEKEKEKEKQDKEKQEEKESETSREDEYKQKYSRTYDETYQRYR  
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RERRRRPREKRRSTGVSWTQDSDENEQEQSDTEEGSNKKTQTDsisRYETSSTSAGDRYDSSLGRSGS  
YSYLEERKPYSSRLEKDDSTDFKLYEQILAENEKKAQLHDTNMELTDLKLQLEKATQRQERFADRSL  
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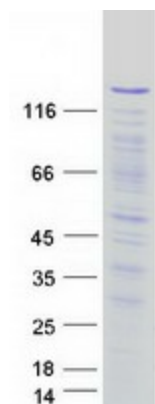
**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

Tag:	C-Myc/DDK
Predicted MW:	115.1 kDa
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol



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<b>Preparation:</b>	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
<b>Note:</b>	For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.
<b>Storage:</b>	Store at -80°C.
<b>Stability:</b>	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
<b>RefSeq:</b>	<a href="#">NP_002471</a>
<b>Locus ID:</b>	4659
<b>UniProt ID:</b>	<a href="#">O14974</a> , <a href="#">B2RAH5</a>
<b>RefSeq Size:</b>	4613
<b>Cytogenetics:</b>	12q21.2-q21.31
<b>RefSeq ORF:</b>	3132
<b>Synonyms:</b>	GUBS; M130; MBS; MYPT1
<b>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>
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Focal adhesion, Long-term potentiation, Regulation of actin cytoskeleton, Vascular smooth muscle contraction

**Product images:**

Coomassie blue staining of purified PPP1R12A protein (Cat# [TP323540]). The protein was produced from HEK293T cells transfected with PPP1R12A cDNA clone (Cat# [RC223540]) using MegaTran 2.0 (Cat# [TT210002]).