

## Product datasheet for PH327493

### Myosin Phosphatase (PPP1R12A) (NM\_001143885) Human Mass Spec Standard

#### Product data:

Product Type:	Mass Spec Standards
Description:	PPP1R12A MS Standard C13 and N15-labeled recombinant protein (NP_001137357)
Species:	Human
Expression Host:	HEK293
Expression cDNA Clone or AA Sequence:	RC227493
Predicted MW:	115.1 kDa
Protein Sequence:	>RC227493 representing NM_001143885 Red=Cloning site Green=Tags(s)

MKMADAKQKRNEQLKRWIGSETDLEPPVVKRQKTKVKFDDGAVFLAACSSGDTDEVLLKLLHRGADINYAN  
VDGLTALHQACIDDNVDMVKFLVENGANINQPDNEGWIPLHAAAACSGYLDIAEFLIGQGAHVAVNSEGD  
TPLDIAEEEEAMEELLQNEVNRQGV DIEAARKEEERIMLRDARQWLNSGHINDVRHAKSSGTLHVA AAKG  
YTEVLKLLIQAGYDVNIKDYDGWTPHAAAHWGKEEACRILVDNLCDMEMVNVKGQTAFDVADEDILGYL  
EELQKKQNLHSEKRDKKSPLIESTANMDNNSQKTFKNKETLIEPEKNASRIESLEQEKVDEEEEGKK  
DESSCSSEEDDESEEAETDKTKPLASVTNANTSSTQAAPVAVTTPTVSSGQATPTSPIKKFPTTATK  
ISPKEEERKDESPATWRLGLRKTGSYGALAEITASKEGQKEKDTAGVTRSASSPRLSSSLDNKEKEKDSK  
GTRLAYVAPTIPRRLASTSDIEEKENRDSSSLRTSSSYTRRWEDDLKKNSSVNEGSTYHKSCSFGRRQD  
DLISSVPSTTSTPTVTSAGLQKSLSSSTSTTKITTGSSSAGTQSSTSNRLWAEDSTEKEKDSVPTAV  
TIPVAPTIVNAAASTTTLT TTTTAGTVSSTTEVRERRRSYLTPVRDEESESQRKARSRQARQSRRSTQGV  
LTDLQEAETIGRSRSTRTREQENEEKEKEKEKQDKEKQEEKESSETSREDEYKQKYSRTYDETYQRYR  
PVSTSSSTTPSSSLSTMSSSLYASSQLNRPNSLVGITSAYSRGITKENEREGEKREEEKEGEDKSQPKSI  
RERRRPREKRRSTGVSWFTQSDENEQEQQSDTEEGSNKKETQTDISI SRYETSST SAGDRYDSSLGRSGS  
YSYLEERKPYSSRLEKDDSTDFKKLYEQILAENEKKAQLHDTNMEITDLKLEKATQRQERFADRSL  
EMEKRRERLERRISEMEEELKMLPDLKADNQLKDENGALIRVISKLSK

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Tag:	C-Myc/DDK
Purity:	> 80% as determined by SDS-PAGE and Coomassie blue staining
Concentration:	>0.05 µg/µL as determined by microplate BCA method
Labeling Method:	Labeled with [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>4</sub> ]-L-Arginine and [U- <sup>13</sup> C <sub>6</sub> , <sup>15</sup> N <sub>2</sub> ]-L-Lysine
Buffer:	25 mM Tris-HCl, 100 mM glycine, pH 7.3
Storage:	Store at -80°C. Avoid repeated freeze-thaw cycles.



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<b>Stability:</b>	Stable for 3 months from receipt of products under proper storage and handling conditions.
<b>RefSeq:</b>	<a href="#">NP_001137357</a>
<b>RefSeq ORF:</b>	3090
<b>Synonyms:</b>	GUBS; M130; MBS; MYPT1
<b>Locus ID:</b>	4659
<b>UniProt ID:</b>	<a href="#">O14974</a> , <a href="#">B2RAH5</a>
<b>Cytogenetics:</b>	12q21.2-q21.31
<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