Recombinant Human PPP1R12A protein, MYC/DDK-tagged

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

SPECIFICATION

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

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Molecular Mass	115.1 kDa
Purity	> 80% as determined by SDS-PAGE and Coomassie blue staining
Notes	Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.
Concentration	>50 ug/mL as determined by microplate BCA method

GENE INFORMATION

Gene Name	PPP1R12A protein phosphatase 1, regulatory subunit 12A [Homo sapiens]
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_002480
Protein Refseq	NP_002471
MIM	602021
UniProt ID	O14974

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Chromosome Location	12q15-q21
Pathway	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;
Function	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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