MYPT1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	MYPT1, Polyclonal Antibody
Full Product Name	MYPT1 (Phospho-Thr853) Polyclonal Conjugated Antibody
Product Gene Name	anti-MYPT1 antibody
Product Synonym Names	PPP1R12A; MBS; MYPT1; Protein phosphatase 1 regulatory subunit 12A; Myosin phosphatase-targeting subunit 1; Myosin phosphatase target subunit 1; Protein phosphatase myosin-binding subunit
Clonality	Polyclonal
Host	Rabbit
Species Reactivity	Human
Form/Format	0.01M Sodium Phosphate, 0.25M NaCl, pH 7.6, 5mg/ml Bovine Serum Albumin, 0.02% Sodium Azide
Specificity	Phospho-MYPT1 (T853) polyclonal antibody detects endogenous levels of MYPT1 protein only when phosphorylated at T853.
Preparation and Storage	Store at 4 degree C for 6 months.
Molecular Weight	115 kDa
Chromosome Location	Chromosome: 12; NC_000012.11 (80167343..80329235, complement). Location: 12q15-q21
OMIM	602021
3D Structure	ModBase 3D Structure for O14974
Immunogen	Synthesized peptide derived from human MYPT1 around the phosphorylation site of T853.
Conjugation	Biotin AF350 AF405 AF488 AF555 AF594 AF647 AF680 AF750
Excitation Emission	AF350: 346nm/442nm
Applications Tested/Suitable for anti-MYPT1 antibody	Most Applications
Application Notes for anti-MYPT1 antibody	Suggested Dilution: AF350 conjugated: most applications: 1:50-1:250 AF405 conjugated: most applications: 1:50-1:250 AF488 conjugated: most applications: 1:50-1:250 AF555 conjugated: most applications: 1:50-1:250 AF594 conjugated: most applications: 1:50-1:250 AF647 conjugated: most applications: 1:50-1:250 AF680 conjugated: most applications: 1:50-1:250 AF750 conjugated: most applications: 1:50-1:250 Biotin conjugated: working with enzyme-conjugated streptavidin, most applications: 1:50-1:1000
Related Product Information for anti-MYPT1 antibody	MBS9437680 is an antibody targeting MYPT1. Also known as MYPT1 (Phospho-Thr853) Polyclonal Conjugated Antibody. Reactive in Human. Host: Rabbit.
Other Notes	Small volumes of anti-MYPT1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for MYPT1. It may not necessarily be applicable to this product.

NCBI GI #	219842212
NCBI GeneID	4659
NCBI Accession #	NP_001137357.1
UniProt Primary Accession #	O14974
UniProt Secondary Accession #	Q2NKL4; Q569H0; Q86WU3; Q8NFR6; Q9BYH0; B4DZ09; F8VWB4
UniProt Related Accession #	O14974
GenBank Nucleotide #	NM_001143885.1
NCBI Official Full Name	protein phosphatase 1 regulatory subunit 12A isoform a
NCBI Official Synonym Full Names	protein phosphatase 1, regulatory subunit 12A
NCBI Official Symbol	PPP1R12A
NCBI Official Synonym Symbols	MBS; M130; MYPT1
UniProt Protein Name	Protein phosphatase 1 regulatory subunit 12A
UniProt Synonym Protein Names	Myosin phosphatase-targeting subunit 1; Myosin phosphatase target subunit 1; Protein phosphatase myosin-binding subunit
Protein Family	Death-associated protein kinase
UniProt Gene Name	PPP1R12A
UniProt Synonym Gene Names	MBS; MYPT1; Myosin phosphatase target subunit 1
UniProt Entry Name	MYPT1_HUMAN
NCBI Protein Information	protein phosphatase 1 regulatory subunit 12A; myosin binding subunit; myosin phosphatase, target subunit 1; myosin phosphatase-targeting subunit 1; protein phosphatase myosin-binding subunit; protein phosphatase 1, regulatory (inhibitor) subunit 12A
NCBI Summary for MYPT1	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]

UniProt Comments for MYPT1	MYPT1: myosin phosphatase target subunit 1, a regulatory subunit of protein phosphatase 1. Also called the myosin-binding subunit of myosin phosphatase. Myosin phosphatase regulates the interaction of actin and myosin downstream of the guanosine triphosphatase Rho. Four splice-variant isoforms have been described. Protein type: Protein phosphatase, regulatory subunit; Motility/polarity/chemotaxis Chromosomal Location of Human Ortholog: 12q15-q21 Cellular Component: kinetochore; nucleoplasm; centrosome; focal adhesion; contractile fiber; cytoplasm; actin cytoskeleton Molecular Function: enzyme inhibitor activity; protein binding; signal transducer activity; phosphatase regulator activity; protein kinase binding Biological Process: regulation of cell adhesion; mitosis; centrosome organization and biogenesis; regulation of nucleocytoplasmic transport; negative regulation of catalytic activity; positive regulation of transcription from RNA polymerase II promoter; mitotic cell cycle; signal transduction; G2/M transition of mitotic cell cycle; protein amino acid dephosphorylation
Research Articles on MYPT1	**1.** results suggested that during atherosclerosis progression oxidative stress mediates the downregulation of MYPT1, which may inhibit smooth muscle cell migration and contribute to the aberrant contractility
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