



MYPT1 Polyclonal Antibody

Catalog No	YP-Ab-04025
Isotype	IgG
Reactivity	Human;Mouse;Rat;Monkey
Applications	WB;IHC;IF;ELISA
Gene Name	PPP1R12A
Immunogen	The antiserum was produced against synthesized peptide derived from human MYPT1. AA range:621-670
Specificity	MYPT1 Polyclonal Antibody detects endogenous levels of MYPT1 protein.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB: 1/500 - 1/2000. IHC: 1/100 - 1/300. ELISA: 1/5000.. IF 1:50-200
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	PPP1R12A;Myosin phosphatase-targeting subunit 1;MYPT1;Protein phosphatase 1 regulatory subunit 12A;MBS;Myosin phosphatase target subunit 1;Protein phosphatase myosin-binding subunit
Observed Band	115kD
Calculated Molecular Weight	115kD
Cell Pathway	Cytoplasm . Cytoplasm, cytoskeleton, stress fiber . Also along actomyosin filaments. .
Tissue Specificity	Expressed in striated muscles, specifically in type 2a fibers (at protein level).
Function	function:Regulates myosin phosphatase activity.,PTM:Phosphorylated by CIT (Rho-associated kinase) (By similarity). Phosphorylated cooperatively by ROCK1 and CDC42BP on Thr-696. Phosphorylated on upon DNA damage, probably by ATM or ATR.,sequence caution:Contaminating sequence. Potential poly-A sequence.,similarity:Contains 6 ANK repeats.,subcellular location:Along actomyosin filaments and stress fibers.,subunit:PP1 comprises a catalytic subunit, PPP1CA, PPP1CB or PPP1CC, and one or several targeting or regulatory subunits. PPP1R12A mediates binding to myosin. Interacts with ARHA and CIT (By similarity). Binds PPP1R12B, ROCK1 and IL16.,



Background

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 phosph

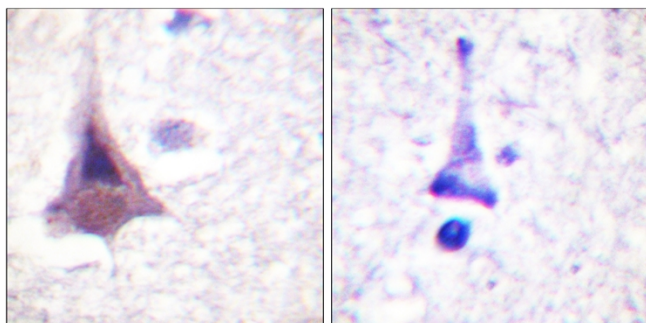
matters needing attention

Avoid repeated freezing and thawing!

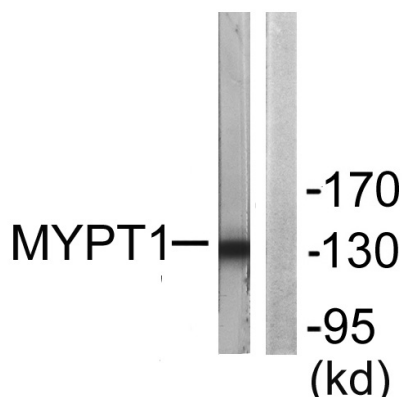
Usage suggestions

This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.

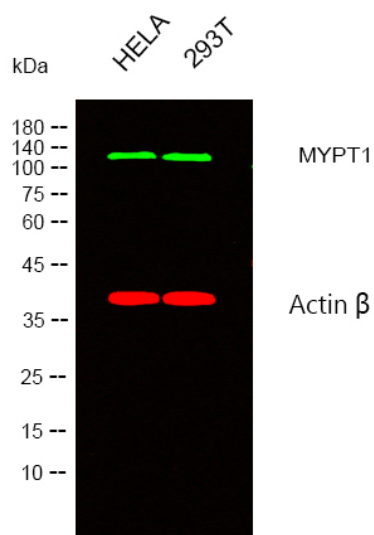
Products Images



Immunohistochemistry analysis of paraffin-embedded human brain tissue, using MYPT1 Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from NIH/3T3 cells, using MYPT1 Antibody. The lane on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from HeLa, 293T cells, (Green) primary antibody was diluted at 1:1000, 4° over night, secondary antibody was diluted at 1:10000, 37° 1 hour. (Red) loading control antibody was diluted at 1:5000 as loading control, 4° over night, secondary antibody was diluted at 1:10000, 37° 1 hour.