Product Name: MYPT1 Rabbit Polyclonal Antibody
Catalog #: APRab14355
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse,Rat,Monkey
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:10000
Molecular Weight	115kDa

Antigen Information

Gene Name	PPP1R12A
Alternative 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
Gene ID	4659.0
SwissProt ID	O14974
Immunogen	The antiserum was produced against synthesized peptide derived from human MYPT1. AA range:621-670

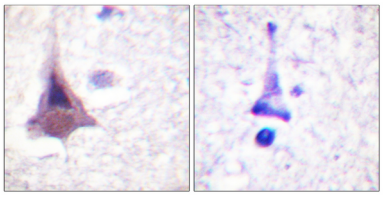
Background

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 phosphfunction: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.,

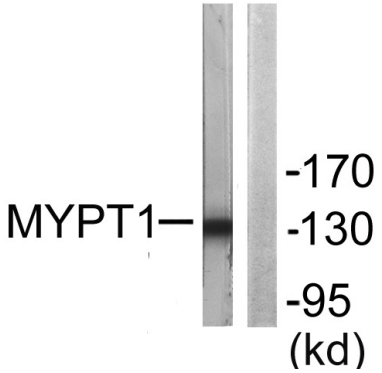
Research Area

Vascular smooth muscle contraction;Focal adhesion;Long-term potentiation;Regulates Actin and Cytoskeleton;

Image Data



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.