

MYPT1 Monoclonal antibody

Catalog Number: 66506-1-Ig 2 Publications

Basic Information

Catalog Number: 66506-1-Ig	GenBank Accession Number: BC111752	Purification Method: Protein A purification
Size: 1500 µg/ml	GeneID (NCBI): 4659	CloneNo.: 2A1A9
Source: Mouse	UNIPROT ID: O14974	Recommended Dilutions: WB 1:2000-1:12000 IF/ICC 1:200-1:800
Isotype: IgG3	Full Name: protein phosphatase 1, regulatory (inhibitor) subunit 12A	
Immunogen Catalog Number: AG17496	Calculated MW: 1030 aa, 115 kDa	
	Observed MW: 115 kDa	

Applications

Tested Applications: IF/ICC, WB, ELISA	Positive Controls:
Cited Applications: WB	WB : Raji cells, HeLa cells, HEK-293 cells, Jurkat cells, K-562 cells
Species Specificity: Human, rat, mouse	IF/ICC : HeLa cells,
Cited Species: human, rat	

Background Information

Myosin phosphatase target subunit 1 (MYPT1), which is also called PPP1R12A, 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. Phosphorylation of MYPT1 at Thr696 and Thr853 results in phosphatase inhibition and cytoskeletal reorganization.

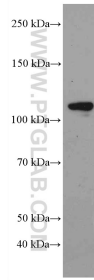
Notable Publications

Author	Pubmed ID	Journal	Application
Sheng Chang	34634287	Brain Res	WB
Yamin Sheng	38548704	J Virol	WB

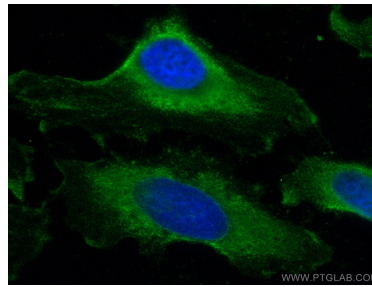
Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

Selected Validation Data



Raji cells were subjected to SDS PAGE followed by western blot with 66506-1-Ig (MYPT1 antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



Immunofluorescent analysis of (-20°C Methanol) fixed HeLa cells using MYPT1 antibody (66506-1-Ig, Clone: 2A1A9) at dilution of 1:400 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).