

For Research Use Only

# MYPT1 Monoclonal antibody, PBS Only



Catalog Number: 66506-1-PBS

## Basic Information

<b>Catalog Number:</b> 66506-1-PBS	<b>GenBank Accession Number:</b> BC111752	<b>Purification Method:</b> Protein A purification
<b>Size:</b> 100ug, Concentration: 1 mg/ml by Nanodrop;	<b>GeneID (NCBI):</b> 4659	<b>CloneNo.:</b> 2A1A9
<b>Source:</b> Mouse	<b>UNIPROT ID:</b> O14974	
<b>Isotype:</b> IgG3	<b>Full Name:</b> protein phosphatase 1, regulatory (inhibitor) subunit 12A	
<b>Immunogen Catalog Number:</b> AG17496	<b>Calculated MW:</b> 1030 aa, 115 kDa	
	<b>Observed MW:</b> 115 kDa	

## Applications

**Tested Applications:**  
WB, IF, Indirect ELISA

**Species Specificity:**  
Human, rat, mouse

## 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.

## Storage

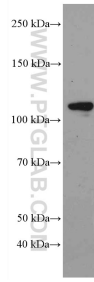
**Storage:**  
Store at -80°C.

**Storage Buffer:**  
PBS Only

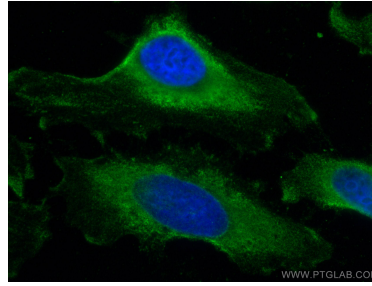
For technical support and original validation data for this product please contact:  
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)      E: proteintech@ptglab.com  
W: ptglab.com

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## 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. This data was developed using the same antibody clone with 66506-1-PBS in a different storage buffer formulation.



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). This data was developed using the same antibody clone with 66506-1-PBS in a different storage buffer formulation.