

# MYPT1 Monoclonal ANTIBODY

Catalog Number: 66506-1-Ig

## Basic Information

<b>Catalog Number:</b> 66506-1-Ig	<b>GenBank Accession Number:</b> BC111752	<b>Recommended Dilutions:</b> WB 1:2000-1:12000
<b>Size:</b> 150 µg/150 µl	<b>GeneID (NCBI):</b> 4659	
<b>Source:</b> Mouse	<b>Full Name:</b> protein phosphatase 1, regulatory (inhibitor) subunit 12A	
<b>Isotype:</b> IgG3	<b>Calculated MW:</b> 1030aa, 115 kDa	
<b>Purification Method:</b> Protein A purification	<b>Observed MW:</b> 115 kDa	
<b>Immunogen Catalog Number:</b> AG17496		

## Applications

**Tested Applications:**  
WB, ELISA  
**Species Specificity:**  
Human

### Positive Controls:

WB : Raji cells; HeLa cells, HEK-293 cells, Jurkat cells, K-562 cells

**Note: suggested antigen retrieval with TE buffer pH 9.0; (\*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0**

## 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.

## Notable Publications

Author	Pubmed ID	Journal	Application
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## Storage

**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.1% sodium azide and 50% glycerol pH 7.3.  
Aliquoting is unnecessary for -20°C storage

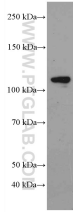
For technical support and original validation data for this product please contact:

T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)

E: [proteintech@ptglab.com](mailto:proteintech@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