

## Product datasheet for **AP06543PU-M**

### Myosin Phosphatase (PPP1R12A) Rabbit Polyclonal Antibody

#### Product data:

|                         |  |
|-------------------------|--|
| Product Type:           | Primary Antibodies   |
| Applications:           | IHC, WB  |
| Recommended Dilution:   | <b>Western blot:</b> 1/500-1/1000.<br><b>Immunohistochemistry on Paraffin Sections:</b> 1/50-1/200.  |
| Reactivity:             | Human, Mouse, Rat  |
| Host:                   | Rabbit   |
| Clonality:              | Polyclonal   |
| Immunogen:              | Synthetic peptide, corresponding to amino acids 671-720 of Human MYPT1.  |
| Specificity:            | This antibody detects endogenous levels of MYPT1 protein.<br>(region surrounding Arg690)   |
| Formulation:            | Phosphate buffered saline (PBS), pH 7.2.<br>State: Aff - Purified<br>State: Liquid purified Ig fraction (> 95% pure by SDS-PAGE)<br>Preservative: 0.05% Sodium Azide |
| Concentration:          | 1.0 mg/ml  |
| Purification:           | Affinity Chromatography using epitope-specific immunogen   |
| Conjugation:            | Unconjugated   |
| Storage:                | Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.<br>Avoid repeated freezing and thawing.   |
| Stability:              | Shelf life: one year from despatch.  |
| Predicted Protein Size: | ~ 140 kDa  |
| Gene Name:              | protein phosphatase 1 regulatory subunit 12A   |
| Database Link:          | <a href="#">Entrez Gene 4659 Human</a><br><a href="#">O14974</a>   |



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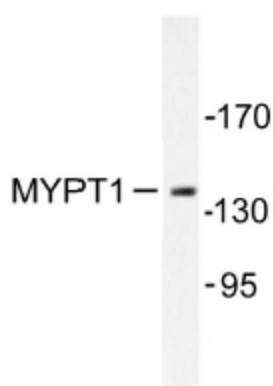
## Background:

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.

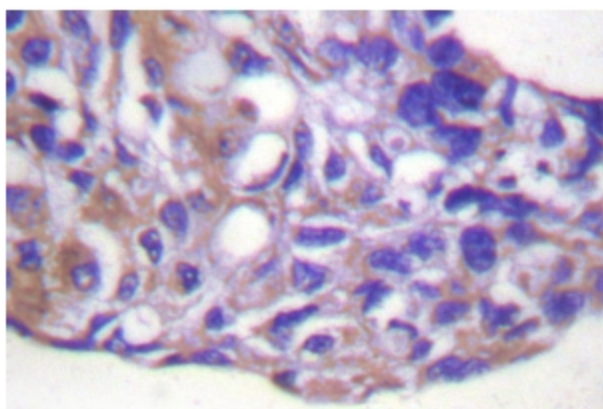
## Synonyms:

MBS

## Product images:



Western blot analysis of MYPT1 antibody in extracts from COS7 cells.



Immunohistochemistry analysis of MYPT1 antibody in paraffin-embedded human breast carcinoma tissue.