

## **Anti-MYPT1 antibody**



**Description** Rabbit polyclonal to MYPT1.

Model STJ94320

**Host** Rabbit

**Reactivity** Human, Mouse, Rat

**Applications** ELISA, IHC, WB

Immunogen Synthesized peptide derived from human MYPT1 around the non-

phosphorylation site of T853.

**Immunogen Region** 590-670 aa

**Gene ID** <u>4659</u>

Gene Symbol PPP1R12A

**Dilution range** WB 1:500-1:2000IHC 1:100-1:300ELISA 1:5000

**Specificity** MYPT1 Polyclonal Antibody detects endogenous levels of MYPT1 protein.

**Tissue Specificity** Expressed in striated muscles, specifically in type 2a fibers (at protein level).

**Purification** The antibody was affinity-purified from rabbit antiserum by affinity-

chromatography using epitope-specific immunogen.

**Note** For Research Use Only (RUO).

Protein Name Protein phosphatase 1 regulatory subunit 12A Myosin phosphatase-targeting

subunit 1 Myosin phosphatase target subunit 1 Protein phosphatase myosin-

binding subunit

Molecular Weight 130 kDa

**Clonality** Polyclonal

**Conjugation** Unconjugated

**Isotype** IgG

**Formulation** Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

**Concentration** 1 mg/ml

**Storage Instruction** Store at -20°C, and avoid repeat freeze-thaw cycles.

Database Links <u>HGNC:7618OMIM:602021</u>

**Alternative Names** Protein phosphatase 1 regulatory subunit 12A Myosin phosphatase-targeting

subunit 1 Myosin phosphatase target subunit 1 Protein phosphatase myosin-

binding subunit

**Function** Key regulator of protein phosphatase 1C (PPP1C). Mediates binding to

myosin. As part of the PPP1C complex, involved in dephosphorylation of PLK1. Capable of inhibiting HIF1AN-dependent suppression of HIF1A

activity.

Sequence and Domain Family Heterotetramerization is mediated by the interaction between a coiled-coil of

PRKG1 and the leucine/isoleucine zipper of PPP1R12A/MBS, the myosin-binding subunit of the myosin phosphatase. The KVKF motif mediates

interaction with PPP1CB.

**Cellular Localization** Cytoplasm. Along actomyosin filaments and stress fibers.

**Post-translational** Phosphorylated by CIT (Rho-associated kinase) . Phosphorylated

cooperatively by ROCK1 and CDC42BP on Thr-696. Phosphorylated on upon

DNA damage, probably by ATM or ATR. In vitro, phosphorylation of Ser-695 by PKA and PKG appears to prevent phosphorylation of the inhibitory site Thr-696, probably mediated by PRKG1. Phosphorylation at Ser-445, Ser-472 and Ser-910 by NUAK1 promotes interaction with 14-3-3, leading to inhibit interaction with myosin light chain MLC2, preventing dephosphorylation of MLC2. May be phosphorylated at Thr-696 by DMPK; may inhibit the myosin phosphatase activity. Phosphorylated at Ser-473 by CDK1 during mitosis, creating docking sites for the POLO box domains of

PLK1. Subsequently, PLK1 binds and phosphorylates PPP1R12A.

**Modifications** 

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