

PPP1R12A Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP9667b

Specification

PPP1R12A Antibody (C-term) Blocking Peptide - Product Information

Primary Accession [O14974](#)

PPP1R12A Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 4659

Other Names

Protein phosphatase 1 regulatory subunit 12A, Myosin phosphatase-targeting subunit 1, Myosin phosphatase target subunit 1, Protein phosphatase myosin-binding subunit, PPP1R12A, MBS, MYPT1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

PPP1R12A Antibody (C-term) Blocking Peptide - Protein Information

Name PPP1R12A ([HGNC:7618](#))

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.

Cellular Location

Cytoplasm. Cytoplasm, cytoskeleton, stress fiber. Note=Also along actomyosin filaments

Tissue Location

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

PPP1R12A Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

PPP1R12A Antibody (C-term) Blocking Peptide - Images

PPP1R12A Antibody (C-term) Blocking Peptide - Background

Myosin phosphatase target subunit 1, which is also called the myosin-binding subunit of myosin phosphatase, 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. Several transcript variants encoding different isoforms have been found for this gene.

PPP1R12A Antibody (C-term) Blocking Peptide - References

Twomey, E., et al. *Exp. Cell Res.* 316(1):68-77(2010)Mori, S., et al. *Proteins* 77(3):732-735(2009)Khromov, A., et al. *J. Biol. Chem.* 284(32):21569-21579(2009)Webb, J.D., et al. *Biochem. J.* 420(2):327-333(2009)Olsen, J.V., et al. *Cell* 127(3):635-648(2006)Ficarro, S.B., et al. *Rapid Commun. Mass Spectrom.* 19(1):57-71(2005)Brill, L.M., et al. *Anal. Chem.* 76(10):2763-2772(2004)Seko, T., et al. *Circ. Res.* 92(4):411-418(2003)Kitazawa, T., et al. *J. Physiol. (Lond.)* 546 (PT 3), 879-889 (2003) Velasco, G., et al. *FEBS Lett.* 527 (1-3), 101-104 (2002)