



MYPT1 (Myosin phosphatase-targeting subunit 1, Myosin phosphatase target subunit 1, MYPT1, Protein phosphatase 1 regulatory subunit 12A, Protein phosphatase myosin-binding subunit)

Catalog number

M9925-01C

Supplier

United States Biological

Protein phosphatase 1 (PP1) is a ubiquitous eukaryotic protein serine/threonine phosphatase involved in the regulation of various cell functions. Substrate specificity is determined by the binding of a regulatory subunit to the PP1 catalytic subunit (PP1c). It is estimated that over fifty different regulatory subunits exist. The myosin phosphatase holoenzyme is composed of three subunits: the PP1 catalytic subunit (PP1c), a targeting/regulatory subunit (MYPT/myosin-binding subunit of myosin phosphatase) and a 20 kD subunit of unknown function (M20). MYPT binding to PP1c delta alters the conformation of the catalytic cleft and increases enzyme activity and specificity. Two MYPT isoforms that are 61% identical have been described. MYPT1 is widely expressed while MYPT2 expression appears to be exclusive to heart and brain. Related family members also include MBS85, MYPT3 and TIMAP.

Applications

Suitable for use in Western Blot. Other applications not tested.

Recommended Dilutions

Western Blot: 1:1000

Optimal dilutions to be determined by the researcher.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for 12 months after receipt. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Synthetic peptide corresponding to N-terminal residues of human MYPT1. Species Sequence Homology: chicken, bovine, canine, porcine and zebra fish

Formulation

Supplied as a liquid in 10mM sodium HEPES pH 7.5, 150mM sodium chloride, 0.1mg/ml BSA, 50% glycerol

Purity

Purified by Protein A and peptide affinity chromatography

Specificity

Recognizes endogenous levels of total human MYPT1. The antibody is unlikely to cross-react with



MYPT2 and does not cross-react with other family members. Species Crossreactivity: mouse, rat, hamster and monkey

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

WB

Crossreactivity

Hm Hu Mk Mo Rt

Storage

-20°C

MW

140

Reference

1. Cohen, P.T. (2002) J Cell Sci 115, 241-56. 2. Terrak, M. et al. (2004) Nature 429, 780-4. 3. Fujioka, M. et al. (1998) Genomics 49, 59-68. 4. Ito, M. et al. (2004) Mol Cell Biochem 259, 197-209. 5. Birukova, A.A. et al. (2004) Microvasc Res 67, 64-77. 6. Birukova, A.A. et al. (2004) J Cell Physiol 201, 55-70.