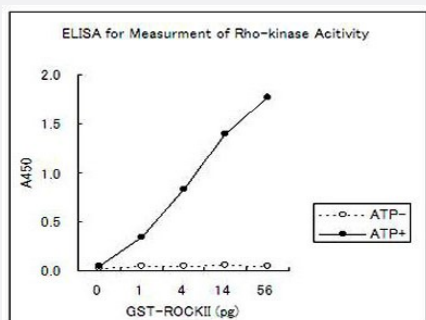


MBS/MYPT1 (phospho T696) monoclonal antibody, clone AF-20

Catalog # MAB0001 Size 100 ug

Applications



Enzyme-linked Immunoabsorbent Assay

ELISA for measurement of recombinant Rho-kinase activity using MBS/MYPT1 (phospho T696) monoclonal antibody, clone AF-20 (Cat # MAB0001).

Specification

Product Description	Mouse monoclonal antibody raised against synthetic phosphopeptide of MBS/MYPT1.
Immunogen	Synthetic phosphopeptide (conjugated with KLH) corresponding to residues surrounding T696 of human MBS/MYPT1.
Host	Mouse
Theoretical MW (kDa)	135
Reactivity	Chicken, Human, Mouse, Rat
Specificity	Phospho-MBS/MYPT1 Thr696 Antibody detects endogenous MBS/MYPT1 only when phosphorylated at threonine696. The antibody does not recognize other myosin phosphatase regulatory subunit.
Form	Liquid
Purification	Protein A purification
Isotype	IgG1
Recommend Usage	Western Blot (1-2 ug/mL) ELISA (1 ug/mL) The optimal working dilution should be determined by the end user.

Storage Buffer	In 20 mM phosphate buffer, 300 mM NaCl, pH 7.5 (50% glycerol).
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Storage Instruction	Store at -20°C. Aliquot to avoid repeated freezing and thawing.
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Applications

- Western Blot
- Immunofluorescence
- Enzyme-linked Immunoabsorbent Assay

ELISA for measurement of recombinant Rho-kinase activity using MBS/MYPT1 (phospho T696) monoclonal antibody, clone AF-20 (Cat # MAB0001).

Gene Info — PPP1R12A

Entrez GeneID	4659
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GeneBank Accession#	D87930
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Protein Accession#	BAA22378
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Gene Name	PPP1R12A
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Gene Alias	MBS, MGC133042, MYPT1
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Gene Description	protein phosphatase 1, regulatory (inhibitor) subunit 12A
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Omim ID	602021
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Gene Ontology	Hyperlink
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Gene Summary	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. [provided by RefSeq]
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Other Designations

myosin phosphatase, target subunit 1

Publication Reference

- [Microglial ROCK is essential for chronic methylmercury-induced neurodegeneration.](#)

Shinozaki Y, Danjo Y, Koizumi S.

Journal of Neurochemistry 2019 Jul; [Epub].

Application: IF, IHC, WB, Mouse, Mouse cortices, Mouse microglia

- [Characterisation of the Cullin-3 mutation that causes a severe form of familial hypertension and hyperkalaemia.](#)

Schumacher FR, Siew K, Zhang J, Johnson C, Wood N, Cleary SE, Al Maskari RS, Ferryman JT, Hardege J, Yasmin, Figg NL, Enchev R, Knebel A, O'Shaughnessy KM, Kurz T.

EMBO Molecular Medicine 2015 Oct; 7(10):1285.

Application: WB, Mouse, Aortic vessel

Pathway

- [Focal adhesion](#)
- [Long-term potentiation](#)
- [Regulation of actin cytoskeleton](#)
- [Vascular smooth muscle contraction](#)

Disease

- [Genetic Predisposition to Disease](#)
- [Lung Neoplasms](#)
- [Tobacco Use Disorder](#)