

## Datasheet

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

**Catalog Number:** MAB0001

**Regulatory Status:** For research use only (RUO)

**Product Description:** Mouse monoclonal antibody raised against synthetic phosphopeptide of MBS/MYPT1.

**Clone Name:** AF-20

**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

**Applications:** ELISA, IF, WB  
(See our web site product page for detailed applications information)

**Protocols:** See our web site at <http://www.abnova.com/support/protocols.asp> or product page for detailed protocols

**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).

**Storage Instruction:** Store at -20°C.  
Aliquot to avoid repeated freezing and thawing.

**Entrez GeneID:** 4659

**Gene Symbol:** PPP1R12A

**Gene Alias:** MBS, MGC133042, MYPT1

**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]

#### References:

1. 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 Mol Med. 2015 Aug 18;7(10):1285-306.