Technical Data Sheet

Purified Mouse Anti-MYPT1

Product Information

Material Number: 612165

Alternate Name: Myosin Phosphatase Targeting subunit 1

Size: $150 \ \mu g$ Concentration: $250 \ \mu g/ml$ Clone: 20/MYPT1

Immunogen: Rat MYPT1 aa. 723-840

Isotype:Mouse IgG1Reactivity:QC Testing: Rat

Tested in Development: Human, Mouse

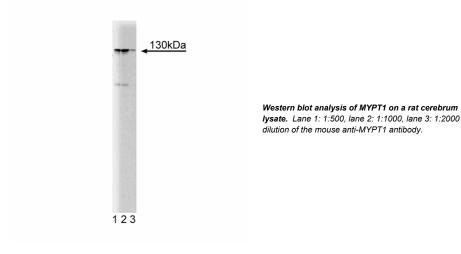
Target MW: 130 kD

Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium

azide.

Description

Protein phosphatase-1 (PP1) is a major serine/threonine phosphatase that is involved in various cellular processes in eukaryotic cells. The PP1 catalytic subunit may be directed to particular subcellular locations by targeting subunits, which can modify the substrate specificity of the enzyme. The PP1 enzyme associated with the myofibrils of striated and smooth muscle forms a complex with Myosin Phosphatase Targeting subunit 1 (MYPT1). MYPT1 contains seven ankyrin repeats in the N-terminal region, and a leucine zipper (LZ) motif in the C-terminus. Alternative splicing of the MYPT1 mRNA leads to expression of a truncated MYPT1 that lacks the leucine zipper region. The expression of MYPT1 splice variants correlate with a smooth muscle phenotype. In the tonic contracting chicken aorta, only the full length MYPT1 is expressed, while in the phasic contracting chicken gizzard, only the truncated MYPT1 is expressed. The leucine zipper motif may be required for association with cGMP-dependent protein kinase I. Thus, MYPT1 may direct not only PP1 enzymatic activity toward myosin, but also may regulate the cGMP responsiveness of PP1 through expression of alternative splice variants.



Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. Store undiluted at -20°C.

Application Notes

Application

Western blot Routinely Tested

BD Biosciences

bdbiosciences.com

 United States
 Canada
 Europe
 Japan
 Asia Pacific
 Latin America/Caribbear

 877.232.8995
 888.259.0187
 32.53.720.550
 0120.8555.90
 65.6861.0633
 55.11.5185.9995

For country-specific contact information, visit bdbiosciences.com/how_to_order/

Conditions: The information disclosed herein is not to be construed as a recommendation to use the above product in violation of any patents. BD Biosciences will not be held responsible for patent infringement or other violations that may occur with the use of our products. Purchase does not include or carry any right to resell or transfer this product either as a stand-alone product or as a component of another product. Any use of this product other than the permitted use without the express written authorization of Becton Dickinson and Company is strictly prohibited. For Research Use Only. Not for use in diagnostic or therapeutic procedures. Not for resale.

BD, BD Logo and all other trademarks are the property of Becton, Dickinson and Company. ©2008 BD



612165 Rev. 1 Page 1 of 2

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

Suggested Companion Products

Catalog Number	Name	Size	Clone
611463	Rat Cerebrum Lysate	500 μg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)

Product Notices

- 1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
- 2. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.
- Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before
 discarding to avoid accumulation of potentially explosive deposits in plumbing.
- 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Chen YH, Chen MX, Alessi DR. Molecular cloning of cDNA encoding the 110 kDa and 21 kDa regulatory subunits of smooth muscle protein phosphatase 1M. FEBS Lett. 1994; 356(1):51-55.(Biology)

Khatri JJ, Joyce KM, Brozovich FV, Fisher SA. Role of myosin phosphatase isoforms in cGMP-mediated smooth muscle relaxation. *J Biol Chem.* 2001; 276(40):27250-27257.(Biology)

Kimura K, Ito M, Amano M. Regulation of myosin phosphatase by Rho and Rho-associated kinase (Rho-kinase). Science. 1996; 273(5272):245-248.(Biology)

612165 Rev. 1 Page 2 of 2