Technical Data Sheet

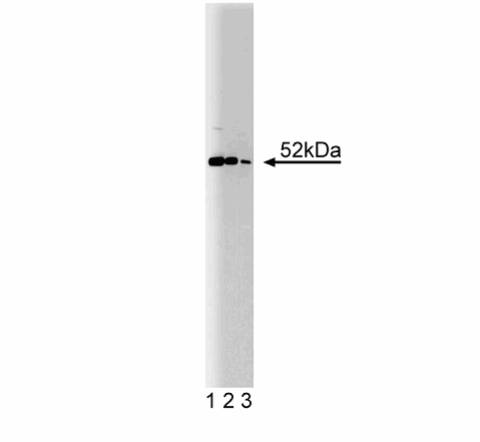
Purified Mouse Anti-MST3

Product Information

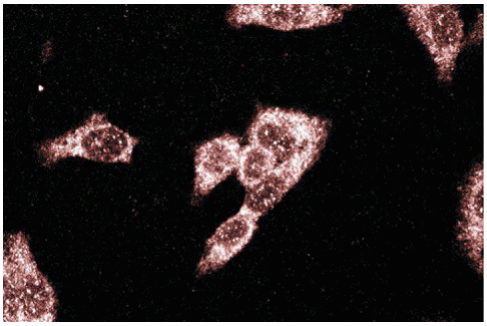
Material Number:	**611056**
Alternate Name:	Mammalian Sterile Twenty-like
Size:	50 µg
Concentration:	250 µg/ml
Clone:	47/MST3
Immunogen:	Human MST3 aa. 275-393
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat
Target MW:	52 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Ste20 is a *S. cerevisiae* Ser/Thr protein kinase that functions upstream of the MAP kinase module. Mammalian and yeast homologs of this kinase are divided into two classes based on their structure and regulation. Members of the first class (Ste20, Cla4, and p21-activated protein kinase [PAK]) contain a C-terminal kinase domain, an N-terminal regulatory domain and a small GTPase Rac1/Cdc42 binding domain. Members of the second class lack GTPase binding sites, but are similar to the former class throughout the catalytic domain. The latter class includes GC kinase, HPK, KHS, KRS1 & 2, MST1, 2, & 3, and SOK-1. MST3 (Mammalian Sterile Twenty-like) is a ubiquitous cytoplasmic kinase that contains an N-terminal kinase domain and a C-terminal regulatory domain. It shares extensive sequence similarity with SOK-1 and is similarly autophosphorylated and activated. MST3 remains distinct in that it prefers Mn2+ to Mg2+ as a divalent cation and uses GTP and ATP as phosphate donors. It does not respond to a variety of mitogenic and stress stimuli and fails to activate known mammalian MAPK pathways. Although its function is undefined, MST3 may function in a novel intracellular signaling pathway.



Western blot analysis of MST3 on a A431 cell lysate (Human epithelial carcinoma; ATCC CRL-1555). *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-MST3 antibody.*



Immunofluorescence staining of HeLa cells (Human cervical epitheloid carcinoma; ATCC CCL-2).

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
Immunofluorescence	Tested During Development

BD Biosciences

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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
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

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.
3. 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

Lian JP, Toker A, Badwey JA. Phosphorylation of the activation loop of gamma p21-activated kinase (gamma-Pak) and related kinases (MSTs) in normal and stressed neutrophils. *J Immunol.* 2001; 166(10):6349-6357.(Biology: Western blot)

Schinkmann K, Blenis J. Cloning and characterization of a human STE20-like protein kinase with unusual cofactor requirements. *J Biol Chem.* 1997; 272(45):28695-28703.(Biology)