Technical Data Sheet

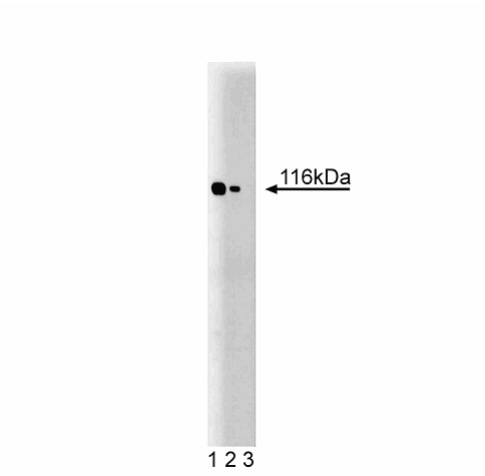
Purified Mouse Anti-TAO1

Product Information

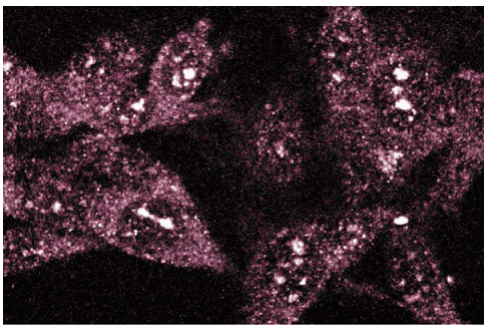
Material Number:	**611368**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	22/TAO1
Immunogen:	Rat TAO1 aa. 352-550
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Rat Tested in Development: Mouse, Human
Target MW:	116 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Mitogen activated protein kinases (MAPKs) are critical components of several signal transduction pathways that convert extracellular stimuli into cellular responses. Four groups of MAPKs (ERKs, JNKs, p38, and ERK5) have been identified in mammalian cells. MAPK pathways contain a 3-kinase cascade consisting of a MAPK, a MAP/ERK kinase (MEK), and a MEK kinase (MEKK). MEKK phosphorylation of MEKs leads to activation and subsequent MEK-mediated phosphorylation of both Thr and Tyr residues at the Thr-X-Tyr dual phosphorylation motif of MAPKs. TAO1 was isolated from a rat cDNA library using the sequence from yeast Ste20p kinase. Sequence analysis shows that TAO1 contains an N-terminal Ser/Thr protein kinase domain, an acidic domain, and two serine-rich domains. The catalytic domain of TAO1 is 40% identical to the p21-activated kinases, PAK1 and PAK2, and 33% identical to MEKK1. TAO1 expression is highest in brain, but it is also detected in heart and lung. TAO1 can activate MEK3, MEK4, and MEK6 from the stress-responsive MAPK pathway, but not MEK1 or 2 from the classical MAPK pathway. Thus, TAO1 may be an important MEKK in the p38-containing stress-responsive MAPK pathway.



Western blot analysis of TAO1 on a rat cerebrum lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the mouse anti-TAO1 antibody.*



Immunofluorescence staining of RSV-3T3 cells.

Preparation and Storage

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

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

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)
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

Hutchison M, Berman KS, Cobb MH. Isolation of TAO1, a protein kinase that activates MEKs in stress-activated protein kinase cascades. *J Biol Chem.* 1998; 273(44):28625-28632.(Biology)