Technical Data Sheet

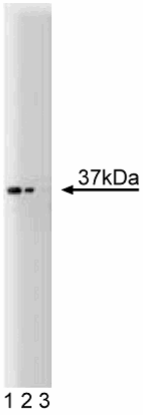
Purified Mouse Anti-MKK3b

Product Information

Material Number:	**611216**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	30/MKK3b
Immunogen:	Human MKK3b aa. 12-114
Isotype:	Mouse IgG2a
Reactivity:	QC Testing: Human Tested in Development: Rat, Mouse
Target MW:	37 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Mitogen activated protein (MAP) kinase signal transduction pathways mediate the effects of various extracellular stimuli on biological processes such as proliferation, differentiation, and death. Three groups of mammalian MAP kinases have been identified: the extracellular signal-regulated kinases (ERK), the c-Jun N-terminal kinases (JNK), and the p38 MAP kinases. The p38 MAP kinases are activated by dual phosphorylation on Thr and Tyr within the motif Thr-Gly-Tyr located in kinase subdomain VIII. Activation of p38 MAPK is mediated specifically by the **M**AP **k**inase **k**inases MKK3 and MKK6, which are activated by a MAP kinase kinase kinase (MKKK). MKK3b, an alternatively spliced isoform of MKK3, contains an extra 29 N-terminal amino acids. Like MKK3 and MKK6, MKK3b specifically activates p38 MAPK and is more efficient than MKK3 in mediating downstream signaling events. Although MKK6 expression is limited, MKK3 and MKK3b are expressed in a wide range of cell types. MKK3, MKK3b, and MKK6 function as specific activators of p38 MAPK. However, they differ in their expression patterns and strength of kinase activity and, therefore, may differentially regulate p38 MAPK activation.



Western blot analysis of MKK3b on HeLa lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of MKK3b.*

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	Not Recommended

Suggested Companion Products

Catalog Number	Name	Size	Clone
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
611449	HeLa Cell Lysate	500 µg	(none)

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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

Enslen H, Raingeaud J, Davis RJ. Selective activation of p38 mitogen-activated protein (MAP) kinase isoforms by the MAP kinase kinases MKK3 and MKK6. *J Biol Chem.* 1998; 273(3):1741-1748.(Biology)

Han J, Wang X, Jiang Y, Ulevitch RJ, Lin S. Identification and characterization of a predominant isoform of human MKK3. *FEBS Lett.* 1997; 403(1):19-22.(Biology)

Moriguchi T, Toyoshima F, Gotoh Y, et al. Purification and identification of a major activator for p38 from osmotically shocked cells. Activation of mitogen-activated protein kinase kinase 6 by osmotic shock, tumor necrosis factor-alpha, and H2O2. *J Biol Chem.* 1996; 271(43):26981-26988.(Biology)