Technical Data Sheet

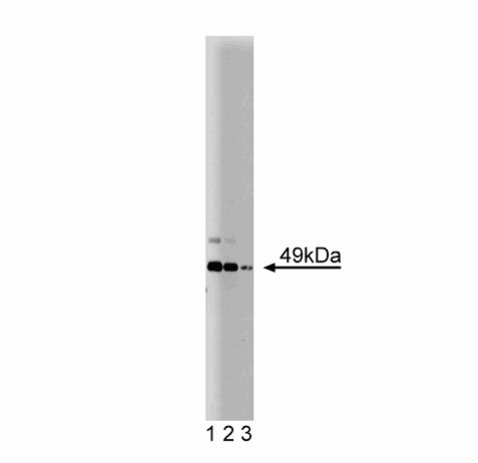
Purified Mouse Anti-JNK/SAPK1

Product Information

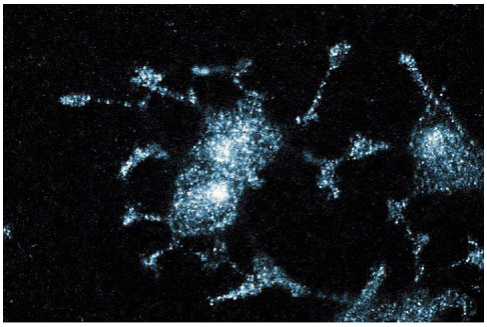
Material Number:	**610627**
Alternate Name:	p49 MAPK
Size:	50 µg
Concentration:	250 µg/ml
Clone:	37/pan-JNK/SAPK1
Immunogen:	Human MAPKp49 aa. 264-415
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Rat Tested in Development: Human, Dog, Mouse, Chicken, Frog
Target MW:	49kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

The Ras signaling pathway links the signals from growth factor receptors with the activation of the MAPK kinase cascade of phosphorylation leading to cell growth and differentiation. External stimuli, such as endotoxins, UV irradiation, heat, and hyperosmolarity, induce an array of cellular responses that culminate with gene expression, ultimately dictating an adaptation to the new environment. The ultimate cellular response to environmental stress is cell death or apoptosis. This pathway is regulated by Rac1 and Cdc42 which link Jun Kinases (JNKs), such as p38. JNK is a c-Jun kinase that was also identified as SAPK1 and MAPKp49. JNK contains homology with the MAP/ERK family of kinases, and contains an N-terminal ATP-binding site and two autophosphorylation "TXY" sites. JNKK1/MEKK4/SEK1 is a dual-specificity kinase activated by conditions of cellular stress, such as heat shock and hyperosmolarity. JNKK1 phosphorylates JNK and p38 but not the ERK MAP kinases. Active JNK and p38 phosphorylate multiple transcription factors that induce expression of genes, such as proinflammatory cytokines.



Western blot analysis of JNK/SAPK1 on PC12 cell lysate. *Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of anti-JNK/SAPK1.*



Immunofluorescent staining of PC12 cells.

Preparation and Storage

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

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development
Immunohistochemistry	Tested During Development
Immunoprecipitation	Not Recommended

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
611454	PC12 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

Hinton DR, Henderson VW, Blanks JC, Rudnicka M, Miller CA. Monoclonal antibodies react with neuronal subpopulations in the human nervous system. *J Comp Neurol.* 1988; 267(3):398-408.(Biology)

Mohit AA, Martin JH, Miller CA. p493F12 kinase: a novel MAP kinase expressed in a subset of neurons in the human nervous system. *Neuron.* 2001; 14(1):76-78. (Biology)