Technical Data Sheet

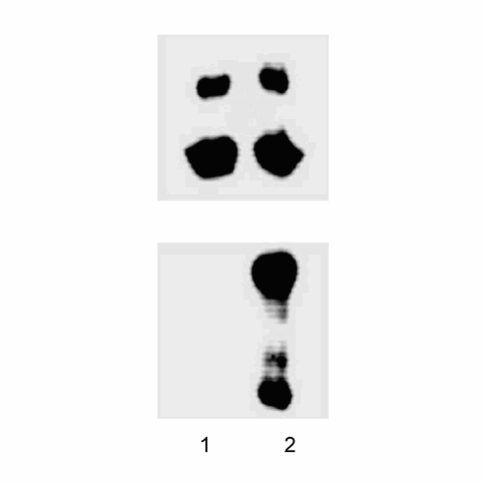
Purified Mouse Anti-JNK/SAPK (pT183/pY185)

Product Information

Material Number:	**612540**
Size:	50 µg
Concentration:	250 µg/ml
Clone:	41/JNK/SAPK (pT183/pY185)
Immunogen:	Phosphorylated Human JNK/SAPK (pT183/pY185) Peptide
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human Tested in Development: Mouse, Rat
Target MW:	43 & 56 kDa
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, like 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. Small GTPases of the Rho family, including cdc42, Rac1, and Rho, transmit the stress signals that initiate the signal cascade. JNK is a c-Jun kinase that was also identified as SAPK1 and MAPKp49. JNK/SAPK, along with p38 and RK5/BMK1, comprise three classes of stress-activated MAPK groups. Complete activation of JNK/SAPK requires the phosphorylation of both Thr183 and Tyr185, which are located in a Thr-X-Tyr motif. The activation of these residues is believed to be carried out by MKK4 and MKK7. Active JNK/SAPK phosphorylates other kinases and multiple transcription factors that induce expression of genes, such as proinflammatory cytokines.



Western blot analysis for JNK/SAPK (pT183/pY185). *HeLa cells (Human cervical epitheloid carcinoma; ATCC CCL-2) were either left untreated (lane 1) or treated with 25 µg/mL anisomycin, an antibiotic and protein synthesis inhibitor, for 15 min at 37°C (lane 2). The top panel was probed with a mouse anti-JNK/SAPK1 antibody (Cat. No. 610627) and the bottom panel was probed with the mouse anti-JNK/SAPK1 (pT183/pY185) antibody at a 1:250 dilution with bands observable at ~ 43 kDa & ~ 56 kDa.*

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
Flow cytometry	Not Recommended

Recommended Assay Procedure:

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

BD Biosciences

bdbiosciences.com

United States	Canada	Europe	Japan	Asia Pacific	Latin America/Caribbean
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/**

Suggested Companion Products

Catalog Number	Name	Size	Clone
611449	HeLa Cell Lysate	500 µg	(none)
611692	HeLa + Anisomycin Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
610627	Purified Mouse Anti-JNK/SAPK1	50 µg	37/pan-JNK/SAPK1

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

Fleming Y, Armstrong CG, Morrice N, Paterson A, Goedert M, Cohen P. Synergistic activation of stress-activated protein kinase 1/c-Jun N-terminal kinase (SAPK1/JNK) isoforms by mitogen-activated protein kinase kinase 4 (MKK4) and MKK7. *Biochem J.* 2000; 352:145-154.(Biology)

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)

Kyriakis JM, Avruch J. Mammalian mitogen-activated protein kinase signal transduction pathways activated by stress and inflammation.. *Physiol Rev.* 2001; 81(2):807-869.(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)