

Background

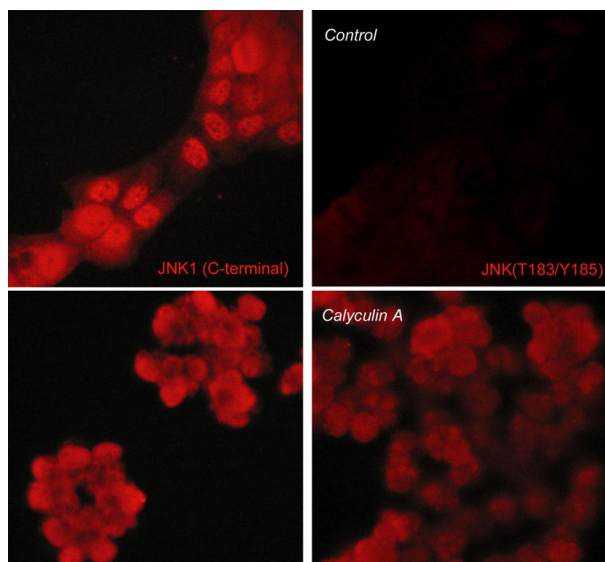
The stress-activated protein kinases (SAPK) or Jun-amino-terminal kinases (JNK) are potently activated by stressors such as UV and gamma radiation. Similar to other MAP Kinases, the core signaling unit is composed of a MAPKKK, usually MEKK1-4 or a mixed lineage kinase (MLK), which phosphorylate and activate MKK4-7, leading to dual phosphorylation and activation of JNK kinases. Rho-GTPases (Rac1 and cdc42) can stimulate MEKKs and MLKs, while MKKs can be activated by a GTPase-independent pathway that involves the germinal center kinase family. There are three JNK genes (JNK1, 2, 3) with further diversification resulting from alternative splicing. Active JNK dimers can translocate to the nucleus to regulate transcription through phosphorylation of c-Jun, ATF-2 and other transcription factors.



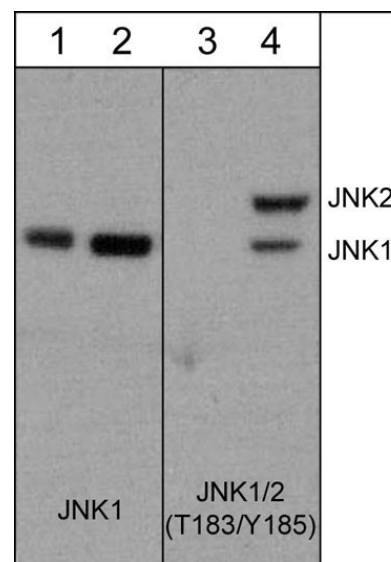
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Background References

- Whitmarsh, A.J. & Davis, R.J. (1998) Trends Biochem. Sci. 23:481.
 Davis, R.J. (1999) Biochem. Soc. Symp. 64:1.
 Ichijo, H. (1999) Oncogene 18:6087.
 Kyriakis, J.M. (1999) J. Biol. Chem. 274:5259.



Immunocytochemical labeling of JNK in control (Top row) or calyculin A-treated A431 cells (Bottom row). The cells were labeled with mouse monoclonal JNK (C-terminal) (Left) or mouse monoclonal JNK (Thr-183/Tyr-185) (Right). The antibodies were detected using goat anti-mouse DyLight® 594.



Western blot analysis of PC12 cells untreated (lanes 1 & 3) or treated with calyculin A (100 nM) for 30 minutes (lanes 2 & 4). The blot was probed with anti-JNK1 (lanes 1 & 2) or anti-JNK1 (T183/Y185) (lanes 3 & 4).

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Immunogen**Uniprot ID: P45983**

Clone M267 was generated from a recombinant protein corresponding to amino acid residues in the C-terminal region of human JNK1. This sequence has high homology to rat and mouse JNK1, and has homology to similar regions in JNK2 and JNK3.

Product Citations

Su, KH et al. (2016) Nat Cell Biol. 18(5):527.

*WB/IP: mouse liver, HEK293***Buffer and Storage**

Mouse monoclonal purified with protein A chromatography is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
IHC	1:100
ICC	1:100

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.
Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This antibody detects a 46 kDa* protein corresponding to the apparent molecular mass of JNK1 on SDS-PAGE immunoblots of human A431 and HeLa, as well as rat PC12 cells.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.

"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

JM2681 JNK (Thr-183/Tyr-185), phospho-specific Mouse Monoclonal

EM2331 ERK1 (C-terminal region) Mouse Monoclonal

EM2061 ERK1 (Thr-202/Tyr-204)[conserved], phospho-specific Mouse Monoclonal

PM1381 p38α MAP Kinase (C-terminal) M138 Mouse Monoclonal

PM1391 p38 MAP Kinase (Thr-180/Tyr-182), phospho-specific Mouse Monoclonal



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