

#9251 Store at -20C

Phospho-SAPK/JNK (Thr183/Tyr185) Antibody



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, W-S, IP	H M R Hm Mk Dm B Sc	Endogenous	46, 54	Rabbit	#P45983	5599

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:200

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Phospho-SAPK/JNK (Thr183/Tyr185) Antibody detects endogenous levels of p46 and p54 SAPK/JNK dually phosphorylated at threonine 183 and tyrosine 185. This antibody does not recognize unphosphorylated SAPK/JNK. This antibody may slightly cross-react with phospho-Erk1/2 or -p38 phosphorylated at the homologous residues. It will also react with SAPK/JNK singly phosphorylated at Thr183 and singly phosphorylated at Tyr185.

Species predicted to react based on 100% sequence homology:

Xenopus

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr183/Tyr185 of human SAPK/JNK. Antibodies are purified by protein A and peptide affinity chromatography.

Background

The stress-activated protein kinase/Jun-amino-terminal kinase SAPK/JNK is potently and preferentially activated by a variety of environmental stresses, including UV and gamma radiation, ceramides, inflammatory cytokines, and in some instances, growth factors and GPCR agonists (1-6). As with the other MAPKs, the core signaling unit is composed of a MAPKKK, typically MEKK1-MEKK4, or by one of the mixed lineage kinases (MLKs), which phosphorylate and activate MKK4/7. Upon activation, MKKs phosphorylate and activate the SAPK/JNK kinase (2). Stress signals are delivered to this cascade by small GTPases of the Rho family (Rac, Rho, cdc42) (3). Both Rac1 and cdc42 mediate the stimulation of MEKKs and MLKs (3). Alternatively, MKK4/7 can be activated in a GTPase-independent mechanism via stimulation of a germinal center kinase (GCK) family member (4). There are three SAPK/JNK genes each of which undergoes alternative splicing, resulting in numerous isoforms (3). SAPK/JNK, when active as a dimer, can translocate to the nucleus and regulate transcription through its effects on c-Jun, ATF-2, and other transcription factors (3,5).

Background References

- Davis, R.J. (1999) *Biochem Soc Symp* 64, 1-12.
- Ichijo, H. (1999) *Oncogene* 18, 6087-93.
- Kyriakis, J.M. and Avruch, J. (2001) *Physiol Rev* 81, 807-69.
- Kyriakis, J.M. (1999) *J Biol Chem* 274, 5259-62.
- Leppä, S. and Bohmann, D. (1999) *Oncogene* 18, 6158-62.
- Whitmarsh, A.J. and Davis, R.J. (1998) *Trends Biochem Sci* 23, 481-5.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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