Revision 1

#5136 Store at -20C

Phospho-SAPK/JNK (Thr183/Tyr185) (G9) Mouse mAb (Biotinylated)

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Hm Sc	Endogenous	46, 54	Mouse IgG1	#P45983	5599

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 140 mM NaCl, 3 mM KCI, 10 mM sodium phosphate (pH 7.4) dibasic, 2 mM potassium phosphate monobasic, 2 mg/mL BSA, and 50% glycerol. Store at –20°C. *Do not aliquot the antibody.*

Specificity/Sensitivity

Phospho-SAPK/JNK (Thr183/Tyr185) (G9) Mouse mAb (Biotinylated) detects endogenous levels of p46 and p54 SAPK/JNK dually phosphorylated at Thr183 and Tyr185. This antibody does not recognize endogenous levels of phosphorylated p44/42 MAPK or p38 MAP kinase.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Thr183/Tyr185 of human SAPK/JNK protein.

Description

This Cell Signaling Technology antibody is conjugated to biotin under optimal conditions. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated antibody Phospho-SAPK/JNK (Thr183/Tyr185) (G9) Mouse mAb #9255.

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

1. Davis, R.J. (1999) *Biochem Soc Symp* 64, 1-12.
2. Ichijo, H. (1999) *Oncogene* 18, 6087-93.
3. Kyriakis, J.M. and Avruch, J. (2001) *Physiol Rev* 81, 807-69.
4. Kyriakis, J.M. (1999) *J Biol Chem* 274, 5259-62.
5. Leppä, S. and Bohmann, D. (1999) *Oncogene* 18, 6158-62.
6. 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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Sc:** S. cerevisiae

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Limited Uses

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