

Phospho-SAPK/JNK (Thr183/Tyr185) Blocking Peptide

✓ 100 µl

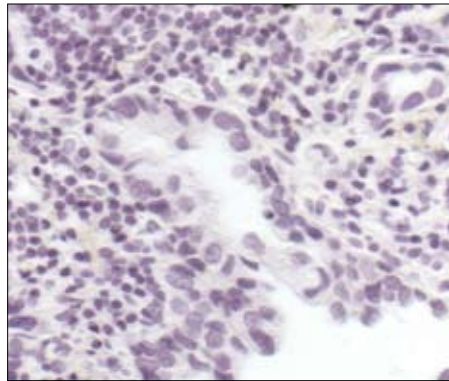
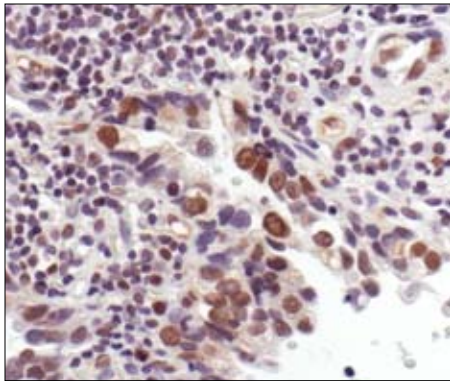
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rev. 09/10/09

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Immunohistochemical analysis of paraffin-embedded human lung carcinoma using Phospho-SAPK/JNK (Thr183/Tyr185) Antibody #9251 in the presence of control peptide (left) or Phospho-SAPK/JNK (Thr183/Tyr185) Blocking Peptide (right).

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, by 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).

Description: This peptide is used to specifically block Phospho-SAPK/JNK (Thr183/Tyr185) Antibody #9251 reactivity.

Quality Control: The quality of the peptide was evaluated by reversed-phase HPLC and by mass spectrometry. The peptide blocks Phospho-SAPK/JNK (Thr183/185) Antibody #9251 signal in immunohistochemistry.

Directions for Use: For Immunohistochemistry, add twice the volume of peptide as volume of antibody used in 100 µl total volume. Incubate for a minimum of 30 minutes prior to adding the entire volume to the slide. Recommended antibody dilutions can be found on the Phospho-SAPK/JNK (Thr183/Tyr185) Antibody #9251 data sheet.

Applications: Use as a blocking reagent to evaluate the specificity of antibody reactivity in immunohistochemistry protocols.

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.

Storage: Supplied in 20 mM potassium phosphate (pH 7.0), 50 mM NaCl, 0.1 mM EDTA, 1 mg/ml BSA and 5% glycerol. Store at -20°C.

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