

**#9912** Store at -20°C

## Phospho-SAPK/JNK Pathway Antibody Sampler Kit


**Cell Signaling**  
TECHNOLOGY®

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1 Kit (4 x 20 microliters)

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-SAPK/JNK (Thr183/Tyr185) (81E11) Rabbit mAb	4668	20 µl	46, 54 kDa	Rabbit IgG
Phospho-SEK1/MKK4 (Ser257) (C36C11) Rabbit mAb	4514	20 µl	44 kDa	Rabbit
Phospho-c-Jun (Ser63) (54B3) Rabbit mAb	2361	20 µl	48 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
Phospho-ATF-2 (Thr71)/ATF-7 (Thr53) (A8J7P) Rabbit mAb	15411	20 µl	65,75 kDa	Rabbit IgG

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### Description

The Phospho-SAPK/JNK Pathway Antibody Sampler Kit provides a fast and economical means of evaluating multiple members of the SAPK/JNK pathway as well as their activation state. The kit contains enough primary and secondary antibodies to perform two Western blot experiments.

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### 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.

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