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#4668

## Phospho-SAPK/JNK (Thr183/Tyr185) (81E11) Rabbit mAb

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S, IP, IHC-P	H M R Dm Sc	Endogenous	46, 54	Rabbit IgG	#P45983	5599

### Product Usage Information

#### Application

Western Blotting  
Simple Western™  
Immunoprecipitation  
Immunohistochemistry (Paraffin)

#### Dilution

1:1000  
1:10 - 1:50  
1:200  
1:50

### 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.

For a carrier free (BSA and azide free) version of this product see product #58328.

### Specificity/Sensitivity

Phospho-SAPK/JNK (Thr183/Tyr185) (81E11) Rabbit mAb detects endogenous levels of p46 and p54 SAPK/JNK when phosphorylated at Thr183 and Tyr185. It will also react with SAPK/JNK singly phosphorylated at Tyr185. This antibody may cross-react with phosphorylated p44/42 or p38 MAP kinases.

### Source / Purification

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

### 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 MEKs 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 BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

### Applications Key

**W:** Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin)

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Dm:** D. melanogaster **Sc:** S. cerevisiae

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