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#9155

## Phospho-SEK1/MKK4 (Ser80) Antibody

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

|                           |                             |                                   |                        |                                  |                               |                                |
|---------------------------|-----------------------------|-----------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|
| <b>Applications:</b><br>W | <b>Reactivity:</b><br>H M R | <b>Sensitivity:</b><br>Endogenous | <b>MW (kDa):</b><br>44 | <b>Source/Isotype:</b><br>Rabbit | <b>UniProt ID:</b><br>#P45985 | <b>Entrez-Gene Id:</b><br>6416 |
|---------------------------|-----------------------------|-----------------------------------|------------------------|----------------------------------|-------------------------------|--------------------------------|

|   |  |                           |
|---|--|---------------------------|
| <b>Product Usage Information</b>                                  | <b>Application</b><br>Western Blotting   | <b>Dilution</b><br>1:1000 |
| <b>Storage</b>  | 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.   |                           |
| <b>Specificity/Sensitivity</b>                                    | Phospho-SEK1/MKK4 (Ser80) Antibody detects endogenous levels of SEK1/MKK4 only when phosphorylated at serine 80. This antibody does not cross-react with the corresponding phosphorylated residues of MEK1, MEK2 or MKK3.  |                           |
| <b>Species predicted to react based on 100% sequence homology</b> | Xenopus  |                           |
| <b>Source / Purification</b>                                      | Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser80 of human SEK1/MKK4. Antibodies are purified by protein A and peptide affinity chromatography.   |                           |
| <b>Background</b>   | SAPK/Erk kinase (SEK1), also known as MKK4 or Jun kinase kinase (JNKK), activates the MAP kinase homologues SAPK and JNK in response to various cellular stresses and inflammatory cytokines (1-3). Activation of SEK1 occurs through MEKK phosphorylation of serine and threonine residues at positions 257 and 261, respectively. Like MEK, SEK is a dual-specificity protein kinase that phosphorylates SAPK/JNK at a conserved T*PY* site in its activation loop (4). Phosphorylation by Akt at Ser80 inhibits SEK1 and suppresses stress-activated signal transduction (5). |                           |
| <b>Background References</b>                                      | <ol style="list-style-type: none"> <li>1. Davis, R.J. (1994) <i>Trends Biochem. Sci.</i> 19, 470-473.</li> <li>2. Sanchez, I. et al. (1994) <i>Nature</i> 372, 794-798.</li> <li>3. Yan, M. et al. (1994) <i>Nature</i> 372, 798-800.</li> <li>4. Kyriakis, J.M. et al. (1994) <i>Nature</i> 369, 156-160.</li> <li>5. Park, H. et al. (2002) <i>J. Biol. Chem.</i> 277, 2573-2578.</li> </ol>   |                           |

|                               |  |
|-------------------------------|--|
| <b>Species Reactivity</b>     | Species reactivity is determined by testing in at least one approved application (e.g., western blot).   |
| <b>Western Blot Buffer</b>    | <b>IMPORTANT:</b> 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.  |
| <b>Applications Key</b>       | <b>W:</b> Western Blotting   |
| <b>Cross-Reactivity Key</b>   | <b>H:</b> Human <b>M:</b> Mouse <b>R:</b> Rat  |
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