



Phospho-MAP2K1-pS221 Polyclonal Antibody

E9P006

Catalog Number: E9P0064**Amount:** 100ul

Background: MEK1 and MEK2, also called MAPK or Erk kinases, are dual-specificity protein kinases that function in a mitogen activated protein kinase cascade controlling cell growth and differentiation (1-3). Activation of MEK1 and MEK2 occurs through phosphorylation of two serine residues at positions 217 and 221, located in the activation loop of subdomain VIII, by Raf-like molecules. MEK1/2 is activated by a wide variety of growth factors and cytokines and also by membrane depolarization and calcium influx (1-4). Constitutively active forms of MEK1/2 are sufficient for the transformation of NIH/3T3 cells or the differentiation of PC-12 cells (4). MEK activates p44 and p42 MAP kinase by phosphorylating both threonine and tyrosine residues at sites located within the activation loop of kinase subdomain VIII. MEK1 is phosphorylated at Ser298 by PAK1, which facilitates signal transduction from Raf to MEK1 and Erk2 (5-7). MEK1 is also phosphorylated by cdk5 at Thr286 in mitotic cells, causing negative feedback of the p44/42 MAP kinase pathway (8).

Species: Rabbit**Isotype:** IgG

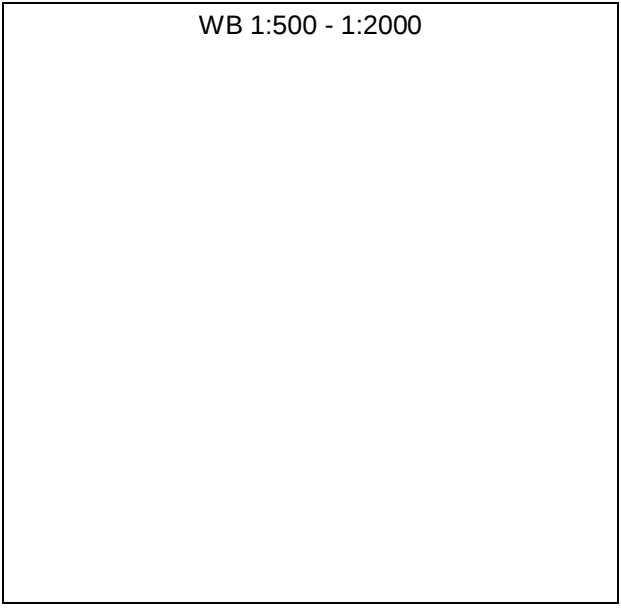
Storage/Stability: Store at -20oC or -80oC. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Synonyms: MEK1; MKK1; MAPKK1; PRKMK1**Immunogen:** A phospho specific peptide corresponding to residues surrounding S221 of human MAP2K1**Purification:** Affinity purification**Reactivity:** H M R**Applications:** WB**Molecular Weight:** 43kDa**Swiss-Prot No. :** Q02750**Gene ID:** 5604

References: 1. Crews, C.M. et al. (1992) Science 258, 478-480. 2. Alessi, D.R. et al. (1994) EMBO J. 13, 1610-1619. 3. Rosen, L.B. et al. (1994) Neuron 12, 1207-1221. 4. Cowley, S. et al. (1994) Cell 77, 841-852. 5. Xu, B. et al. (1999) J. Biol. Chem. 274, 34029-34035. 6. Coles, L.C. and Shaw, P.E. (2002) Oncogene 21, 2236-2244. 7. Eblen, S. T. et al. (2002) Mol. Cell. Biol. 22, 6023-6033. 8. Sharma, P. et al. (2002) J. Biol. Chem. 277, 528-534.

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