

## Phospho-MAP2K1-pS221

**Reactivity:** Human Mouse Rat

**Tested applications:** WB

**Recommended Dilution:** WB 1:500 - 1:2000

**Calculated MW:** 43kDa

**Observed MW:** Refer to Figures

**Immunogen:**

A phospho specific peptide corresponding to residues surrounding S221 of human MAP2K1

**Storage Buffer:**

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

**Concentration:**

100µg

**Synonym:**

MEK1; MKK1; MAPKK1; PRKMK1

**Catalog #:** AP0064

**Antibody Type:**

Polyclonal Antibody

**Species:** Rabbit

**Gene ID:** 5604

**Isotype:** IgG

**Swiss Prot:** Q02750

**Purity:** Affinity purification

For research use only.

**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).

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