

# MEK1/2 Control Cell Extracts

✓ Controls for 10 Western mini-blot



Cell Signaling  
TECHNOLOGY™

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**Background:** MEK1 and MEK2, also called MAP 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, also 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 PC12 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. Cell Signaling Technology's Phospho-MEK1/2 (Ser 217/221) Antibody #9121 selectively recognizes active MEK, i.e., only when phosphorylated at Ser217/221 and, hence is an excellent marker of MEK1/2 activity.

**Description:**

*Nonphosphorylated MEK1/2 Cell Extracts:* Total cell extracts from NIH/3T3 cells prepared without treatment, serve as a negative control. Supplied in SDS Sample Buffer. Store at -20°C.

*Phosphorylated MEK1/2 Cell Extracts:* Total cell extracts from NIH/3T3 cells prepared with serum treatment, serve as a positive control. Supplied in SDS Sample Buffer. Store at -20°C.

**Western Blots:** As controls, we recommend using 20 µl of phosphorylated and nonphosphorylated MEK1/2 control extracts. Boil sample before use.

**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.

**Storage:** Supplied in SDS Sample Buffer: 62.5 mM Tris-HCl (pH 6.8 at 25°C), 2% w/v SDS, 10% glycerol, 50 mM DTT, 0.01% w/v bromophenol blue. Store at -20°C.

**Companion Products:**

PhosphoPlus® MEK1/2 (Ser217/221) Antibody Kit #9120

Phospho-MEK1/2 (Ser217/221) Antibody #9121

MEK1/2 Antibody #9122

Phototope®-HRP Western

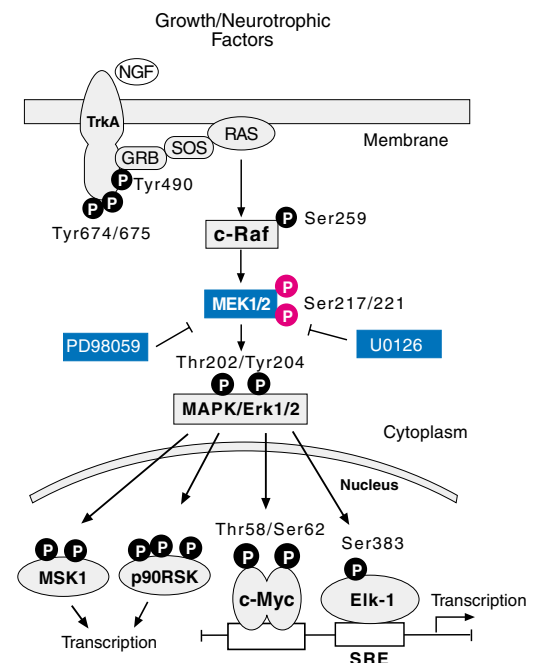
Detection System:

Anti-rabbit IgG, HRP-linked Antibody #7071-1

Prestained Protein Marker, Broad Range (Premixed Format) #7720

HRP Protein Marker Detection Pack #7726

LumiGLO™ Reagent, 20X Peroxide #7003



MEK1/2 Signaling Pathway