

MEK1/2 HeLa Control Cell Extracts

✓ 10 mini-blots

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This product is for *in vitro* research use only and is not intended for use in humans or animals.

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 (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.

Description: *Nonphosphorylated MEK1/2 Cell Extracts:* Total cell extracts from HeLa 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 HeLa cells prepared with TPA treatment (200 nM, 15 min) serve as a positive control. Supplied in SDS Sample Buffer. Store at -20°C.

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

Background 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 or phenol red. 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
MEK1 Antibody #9124
MEK2 Antibody #9125
MEK1/2 (47E6) Rabbit mAb #9126
Phospho-MEK1 (Thr286) Antibody #9127
Phospho-MEK1 (Ser298) Antibody #9128
Anti-rabbit IgG, HRP-linked Antibody #7074
Prestained Protein Marker, Broad Range (Premixed Format) #7720
Biotinylated Protein Ladder Detection Pack #7727
20X LumiGLO® Reagent and 20X Peroxide #7003

