

Catalog No. LF-MA0193

MONOCLONAL ANTIBODY



## Anti-MAPK/ERK Kinase 2(MEK 2)(1A1)

**Background :** The MAP Kinase pathway is a key signaling mechanism that regulates many cellular functions such as cell growth, proliferation, differentiation, development, transformation and apoptosis. The basic arrangement includes a G-protein, a MAPK kinase kinase (MAPKKK) that phosphorylates and activates a MAPK kinase (MAPKK), which in turn phosphorylates MAPK. The ERK (extracellular-signal regulated kinase) cascade is a central MAPK pathway which contains Ras as a G protein, Raf as a MAPKKK, MEK1 (MAPK/ERK kinase1) and MEK2 (MAPK/ERK kinase2) as MAPKK, and ERKs as MAPK. MEK1 and MEK2 are 80% identical to each other, and are essentially identical in most of their kinase domain. MEK1 and MEK2 phosphorylate ERKs equally well, both in vivo and in vitro. MEK1 (45 KDa) and MEK2 (46 KDa) are composed of a catalytic kinase domain, which is surrounded by a regulatory N-terminal domain ( 80 amino acids) and a shorter C-terminal region ( 30 amino acids). Unlike the kinase domains, the N-termini and the characteristic Pro-rich inserts are quite divergent between the two MEKs (40% identity). MEKs are activated by phosphorylation of two Ser residues in their activation loop (Ser218 and Ser222 in MEK1) located within a Ser-Xaa-Ala-Xaa-Ser/Thr motif, typical to all MAPKKs.

**Immunogen :** Recombinant human protein purified from *E.coli* (His-MEK2)

**Host :** Mouse  
**Clone number :** 1A1

**Isotype :** IgG1, k

**Size :** 100 µl

**Compositon :** Hepes with 0.15M NaCl, 0.01% BSA, 0.03% sodium azide, and 50% glycerol

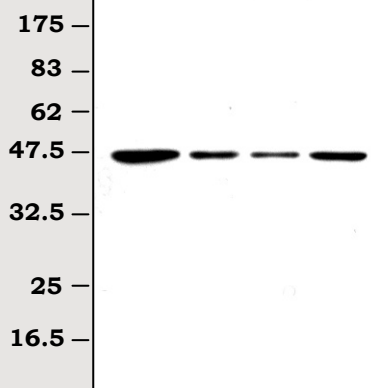
**Positive control :** MCF-7 cell lysate

**Storage :** Store for 1 year at -20°C from date of shipment

### Species cross reactivity

Human	Mouse	Rat
+	-	-

M.W.(kDa) 1 2 3 4



### Immunoblot Analysis of cell lysates

Lane 1 : MCF-7 cell lysate

Lane 2 : U937 cell lysate

Lane 3 : Jurkat T cell lysate

Lane 4 : K562 cell lysate

### Applications :

Western blotting (1: 2,000)

Immunoprecipitation (2 µl/400 µl cell lysates)

### Background Reference :

- 1) Shaul Y.D. and Seger R., 2007, Biochim Biophys Acta. 1773:1213-1226
- 2) Ravingerova T. et al., 2003, Mol Cell Biochem. 247:127-138
- 3) Kolch W., 2000, Biochem J. 351 Pt2:289-305

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