

Product name:	MEK Kinase-4 Rabbit Polyclonal Antibody
Cat number:	ABN13794
Conjugate:	Unconjugated
Size:	100µL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human MAP3K4. AA range:1281-1330
Reactivity:	Human,Mouse
Applications:	IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:10000
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

The central core of each mitogen-activated protein kinase (MAPK) pathway is a conserved cascade of 3 protein kinases: an activated MAPK kinase kinase (MAPKKK) phosphorylates and activates a specific MAPK kinase (MAPKK), which then activates a specific MAPK. While the ERK MAPKs are activated by mitogenic stimulation, the CSBP2 and JNK MAPKs are activated by environmental stresses such as osmotic shock, UV irradiation, wound stress, and inflammatory factors. This gene encodes a MAPKKK, the MEKK4 protein, also called MTK1. This protein contains a protein kinase catalytic domain at the C terminus. The N-terminal nonkinase domain may contain a regulatory domain. Expression of MEKK4 in mammalian cells activated the CSBP2 and JNK MAPK pathways, but not the ERK pathway. In vitro kinase studies indicated that recombinant MEKK4 can specifically phosphorylate and activate PRKMK6 catalytic activity: ATP + a protein = ADP + a phosphoprotein., cofactor: Magnesium., enzyme regulation: N-terminal autoinhibitory domain interacts with the C-terminal kinase domain, inhibiting kinase activity, and preventing interaction with its substrate, MAP2K6. The GADD45 proteins activate the kinase by binding to the N-terminal domain. Activated by phosphorylation on Thr-1504., function: Component of a protein kinase signal transduction cascade. Activates the CSBP2, P38 and JNK MAPK pathways, but not the ERK pathway. Specifically phosphorylates and activates MAP2K4 and MAP2K6., similarity: Belongs to the protein kinase superfamily., similarity: Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase kinase subfamily., similarity: Contains 1 protein kinase domain., subunit: Binds both upstream activators and downstream substrates in multimolecular complexes. Interacts with AXIN1 and DIXDC1; interaction with DIXDC1 prevents interaction with AXIN1., tissue specificity: Expressed at high levels in heart, placenta, skeletal muscle and pancreas, and at lower levels in other tissues.,