

Rabbit MEK1 Polyclonal Antibody | anti-MEK1 antibody

MEK1 Antibody

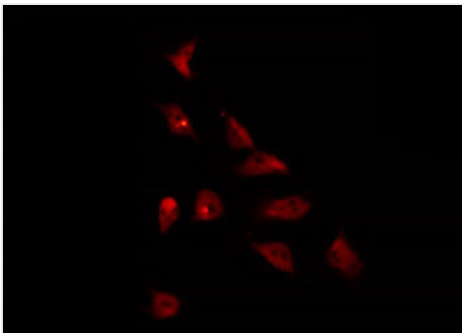
CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA325856	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

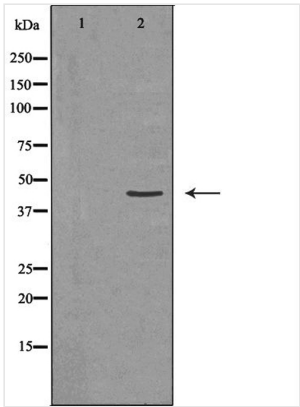
MEK1; Polyclonal Antibody; MEK1 Antibody; Dual specificity mitogen activated protein kinase kinase 1; Dual specificity mitogen-activated protein kinase kinase 1; ERK activator kinase 1; MAP kinase kinase 1; MAP kinase/Erk kinase 1; MAP2K1; MAPK/ERK kinase 1; MAPKK 1; MAPKK1; MEK 1; Mek1; MEKK1; Mitogen activated protein kinase kinase 1; MKK 1; MKK1; MP2K1_HUMAN; PRKMK1; Protein kinase mitogen activated kinase 1 (MAP kinase kinase 1); Protein kinase mitogen activated; kinase 1; anti-MEK1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	MEK1 antibody detects endogenous levels of total MEK1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	393
Applicable Applications for anti-MEK1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	C term-peptide of human MEK1
Subcellular Location	Nucleus; Cytoskeleton
Tissue Specificity	Widely expressed, with extremely low levels in brain.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



IF (Immunofluorescence)
AAA325856 staining NIH-3T3 by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
Western blot analysis of Hela whole cell lysates, using MEK1 Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-MEK1 antibody

Description: 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.

Function: Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and this initiates RAF1 activation. RAF1 then further activates the dual-specificity protein kinases MAP2K1/MEK1 and MAP2K2/MEK2. Both MAP2K1/MEK1 and MAP2K2/MEK2 function specifically in the MAPK/ERK cascade, and catalyze the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in the extracellular signal-regulated kinases MAPK3/ERK1 and MAPK1/ERK2, leading to their activation and further transduction of the signal within the MAPK/ERK cascade. Depending on the cellular context, this pathway mediates diverse biological functions such as cell growth, adhesion, survival and differentiation, predominantly through the regulation of transcription, metabolism and cytoskeletal rearrangements. One target of the MAPK/ERK cascade is peroxisome proliferator-activated receptor gamma (PPARG), a nuclear receptor that promotes differentiation and apoptosis. MAP2K1/MEK1 has been shown to export PPARG from the nucleus. The MAPK/ERK cascade is also involved in the regulation of endosomal dynamics, including lysosome processing and endosome cycling through the perinuclear recycling compartment (PNRC), as well as in the fragmentation of the Golgi apparatus during mitosis.

Subunit Structure: Found in a complex with at least BRAF, HRAS, MAP2K1, MAPK3/ERK1 and RGS14. Forms a heterodimer with MAP2K2/MEK2. Forms heterodimers with KSR2 which further dimerize to form tetramers. Interacts with ARBB2, LAMTOR3, MAPK1/ERK2, MORG1 and RAF1 (By similarity). Interacts with PPARG and with isoform 1 of VRK2 (PubMed:20679487, PubMed:17101779). Interacts with Yersinia yopJ (PubMed:16728640). Interacts with SGK1 (PubMed:19447520). Interacts with BIRC6/bruce (PubMed:18329369). Interacts with KSR1 (PubMed:10409742). Interacts with KAT7; the interaction promotes KAT7 phosphorylation (By similarity).

Post-translational Modifications: Phosphorylation at Ser-218 and Ser-222 by MAP kinase kinases (RAF or MEKK1) positively regulates kinase activity. Also phosphorylated at Thr-292 by MAPK1/ERK2 and at Ser-298 by PAK. MAPK1/ERK2 phosphorylation of Thr-292 occurs in response to cellular adhesion and leads to inhibition of Ser-298 phosphorylation by PAK. Acetylation by Yersinia yopJ prevents phosphorylation and activation, thus blocking the MAPK signaling pathway.

Similarity: The proline-rich region localized between residues 270 and 307 is important for binding to RAF1 and activation of MAP2K1/MEK1. Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily.

NCBI AND UNIPROT INFORMATION

NCBI GI #	5579478
-----------	---------

NCBI GeneID	5604
NCBI Accession #	NP_002746.1
NCBI GenBank Nucleotide #	NM_002755.3
UniProt Accession #	Q02750
Molecular Weight	Observed: 43 kDa Predicted: 44 kDa
NCBI Official Full Name	dual specificity mitogen-activated protein kinase kinase 1
NCBI Official Synonym Full Names	mitogen-activated protein kinase kinase 1
NCBI Official Symbol	MAP2K1
NCBI Official Synonym Symbols	CFC3; MEK1; MKK1; MAPKK1; PRKMK1
NCBI Protein Information	dual specificity mitogen-activated protein kinase kinase 1
UniProt Protein Name	Dual specificity mitogen-activated protein kinase kinase 1
UniProt Gene Name	MAP2K1
UniProt Synonym Gene Names	MEK1; PRKMK1; MAP kinase kinase 1; MAPKK 1; MKK1; MEK 1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com

Online datasheet: <https://stage.aaabiotech.com/polyclonal/mek1-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/325856>