

Rabbit MEK1 Polyclonal Antibody | anti-MAP2K1 antibody

Anti-MEK1 Antibody, Rabbit Polyclonal

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA254542	Rabbit	HumanPredicted to React with: Mouse, Rat (Species predicted to react based on 100% sequence homology)	Immunoprecipitation, Immunofluorescence, Immunocytochemistry, Western Blot

PRODUCT SYNONYMS

MEK1; Polyclonal Antibody; Anti-MEK1 Antibody; Rabbit Polyclonal; MEK1/MAP2K1/MKK1 Antibody; Rabbit PAb; Antigen Affinity Purified; mitogen-activated protein kinase kinase 1; Anti-CFC3 Antibody; Anti-MAPKK1 Antibody; Anti-MKK1 Antibody; Anti-PRKMK1 Antibody; anti-MAP2K1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human Predicted to React with: Mouse, Rat (Species predicted to react based on 100% sequence homology)
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Human MEK1
Purity/Purification	Protein A & Antigen Affinity
Form/Format	Liquid; 0.2um filtered solution in PBS
Applicable Applications for anti-MAP2K1 antibody	IP (Immunoprecipitation), IF (Immunofluorescence), ICC (Immunocytochemistry), WB (Western Blot)
Immunogen	A synthetic peptide corresponding to the N-terminus of the Human MEK1/MAP2K1/MKK1
Conjugation	Unconjugated
Preparation	Produced in rabbits immunized with a synthetic peptide corresponding to the N-terminus of the Human MEK1/MAP2K1/MKK1, and purified by antigen affinity chromatography.
Preparation and Storage	This antibody can be stored at 2-8 degree C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 degree C to -80 degree C. Preservative-Free. Avoid repeated freeze-thaw cycles.

IMAGES



IP (Immunoprecipitation)

MAP2K1 was immunoprecipitated using: Lane A: 0.5 mg HepG2 Whole Cell Lysate; Lane B: 0.5 mg Jurkat Whole Cell Lysate; 4 uL anti-MAP2K1 rabbit polyclonal antibody and 15 uL of 50 % Protein G agarose. Primary antibody: Anti-MAP2K1 rabbit polyclonal antibody, at 1:100 dilution. Secondary antibody: DyLight 800-labeled antibody to rabbit IgG (H+L), at 1:5000 dilution. Developed using the Odyssey technique. Performed under reducing conditions. Predicted band size: 43 kDa. Observed band size: 43 kDa.



IF (Immunofluorescence)

Immunofluorescence staining of MAP2K1 in HeLa cells. Cells were fixed with 4% PFA, blocked with 10% serum, and incubated with rabbit anti-human MAP2K1 polyclonal antibody (1:1000) at 4 degree C overnight. Then cells were stained with the Alexa Fluor 488-conjugated Goat Anti-rabbit IgG secondary antibody (green) and counterstained with DAPI (blue). Positive staining was localized to cytoplasm.



ADDITIONAL INFORMATION

MEK1, also known as MAP2K1 and MKK1, is a member of the dual-specificity protein kinase family, which acts as a mitogen-activated protein (MAP) kinase kinase. MAP kinases, also known as extracellular signal-regulated kinases (ERKs), act as an integration point for multiple biochemical signals. MEK1 is widely expressed, with extremely low levels in the brain. It lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon a wide variety of extra-and intracellular signals. As an essential component of the MAP kinase signal transduction pathway, MEK1 is involved in many cellular processes such as proliferation, differentiation, transcription regulation, and development. Binding 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 and MEK2. MEK1 has been shown to export PPARG from the nucleus. The MAPK 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. MKK1 catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in a Thr-Glu-Tyr sequence located in MAP kinases. Defects in MEK1 can cause Cardiofaciocutaneous Syndrome.

Cancer Drug Targets; Death Receptor Signaling

Rampoldi L, et al. (1998) Chromosomal localization of four MAPK signaling cascade genes: MEK1, MEK3, MEK4 and MEKK5. *Cytogenet Cell Genet.* 78(3-4):301-3.

Zheng CF, et al. (1993) Cloning and characterization of two distinct human extracellular signal-regulated kinase activator kinases, MEK1 and MEK2. *J Biol Chem.* 268(15):11435-9.

Nantel, et al. (1998) Interaction of the Grb10 adapter protein with the Raf1 and MEK1 kinases. *J Biol Chem.* 273(17):10475-84.

Hirata H, et al. (2012) l MicroRNA-1826 targets VEGFC, beta-catenin (CTNNB1) and MEK1 (MAP2K1) in human bladder cancer. *Carcinogenesis.* 33(1):41-8.

NCBI GI #	5579478
NCBI GeneID	5604
NCBI Accession #	NP_002746.1
NCBI GenBank Nucleotide #	NM_002755.3
UniProt Accession #	Q02750
Molecular Weight	43,439 Da
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	MEK1; MKK1; MAPKK1; PRKMK1
NCBI Protein Information	dual specificity mitogen-activated protein kinase kinase 1; MEK 1; MAPKK 1; MAPK/ERK kinase 1; ERK activator kinase 1; protein kinase, mitogen-activated, kinase 1 (MAP 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
UniProt Entry Name	MP2K1_HUMAN

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