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Anti-MEK1 Antibody

Catalog # ABO10700

Product Information

Application	WB, IHC-P, ICC
Primary Accession	Q02750
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Dual specificity mitogen-activated protein kinase kinase 1(MAP2K1) detection. Tested with WB, IHC-P, ICC in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	5604
Other Names	Dual specificity mitogen-activated protein kinase kinase 1, MAP kinase kinase 1, MAPKK 1, MKK1, 2.7.12.2, ERK activator kinase 1, MAPK/ERK kinase 1, MEK 1, MAP2K1, MEK1, PRKMK1
Calculated MW	43439
Application Details	Immunocytochemistry , 0.5-1 □g/ml, Human, - Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Rat, Mouse, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, spindle pole body. Cytoplasm. Nucleus. Localizes at centrosomes during prometaphase, midzone during anaphase and midbody during telophase/cytokinesis.
Tissue Specificity	Widely expressed, with extremely low levels in brain. .
Source	Eukaryota
Protein Name	Dual specificity mitogen-activated protein kinase kinase 1(MAP kinase kinase 1/)
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human

	MEK1(353-367aa KQLMVHAFIKRSDAE), identical to the related mouse and rat sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily.

Protein Information

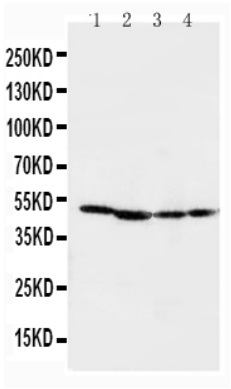
Name	MAP2K1 (HGNC:6840)
Synonyms	MEK1, PRKMK1
Function	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Binding of extracellular ligands such as growth factors, cytokines and hormones to their cell-surface receptors activates RAS and 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. Activates BRAF in a KSR1 or KSR2-dependent manner; by binding to KSR1 or KSR2 releases the inhibitory intramolecular interaction between KSR1 or KSR2 protein kinase and N-terminal domains which promotes KSR1 or KSR2-BRAF dimerization and BRAF activation (PubMed:29433126). 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.
Cellular Location	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, spindle pole body. Cytoplasm. Nucleus Membrane; Peripheral membrane protein. Note=Localizes at centrosomes during prometaphase, midzone during anaphase and midbody during telophase/cytokinesis (PubMed:14737111). Membrane localization is probably regulated by its interaction with KSR1 (PubMed:10409742)
Tissue Location	Widely expressed, with extremely low levels in brain.

Background

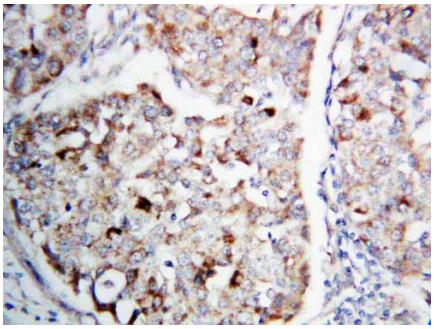
Dual specificity mitogen-activated protein kinase kinase 1 is an enzyme that in humans is encoded by the

MAP2K1 gene. The protein encoded by this gene 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. This protein kinase lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon activation by a wide variety of extra- and intracellular signals. As an essential component of the MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development. Rampoldi et al.(1997) localized the MAP2K1 gene to 15q22.1-q22.33.

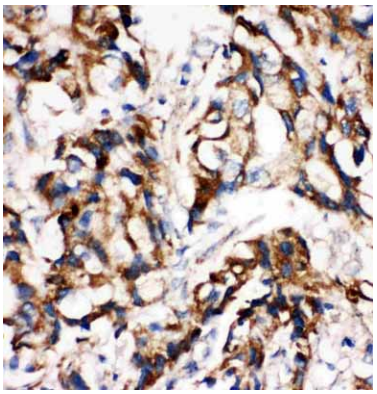
Images



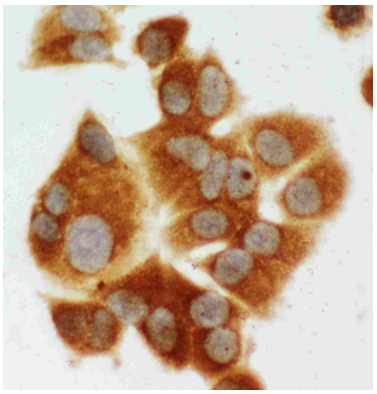
Anti-MEK1 antibody, ABO10700, Western blottingLane 1: Rat Skeletal Muscle Tissue LysateLane 2: Rat Kidney Tissue LysateLane 3: CEM Cell LysateLane 4: COLO20 Cell Lysate



Anti-MEK1 antibody, ABO10700, IHC(P)IHC(P): Human Lung Cancer Tissue



Anti-MEK1 antibody, ABO10700, IHC(P)IHC(P): Human Mammary Cancer Tissue



Anti-MEK1 antibody, ABO10700, ICCICC: MCF-7 Cell

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.