10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-MEK1 (MOUSE) Monoclonal Antibody
MEK1 C-Term Antibody
Catalog # ASR4232

Specification

Anti-MEK1 (MOUSE) Monoclonal Antibody - Product Information

Host	**Mouse**
Conjugate	**Unconjugated**
Target Species	**Human**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Application	**WB, E, I, LCI**
Application Note	**Anti-MEK 1 (MOUSE) antibody is tested in ELISA and Western Blotting. Specific conditions of reactivity should be optimized by the end user. Expect a band of approximately 43.5 kDa.**
Physical State	**Liquid (sterile filtered)**
Buffer	**0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2**
Immunogen	**Anti-MEK1 Monoclonal Antibody was produced in mice by repeated immunizations with synthetic peptide corresponding to amino acid residues near the C-terminus conjugated to KLH.**
Preservative	**0.01% (w/v) Sodium Azide**

Anti-MEK1 (MOUSE) Monoclonal Antibody - Additional Information

Gene ID 5604

Purity
This protein A purified mouse monoclonal antibody reacts specifically with human MEK1. Anti-MEK1 is purified from tissue culture supernatant by protein A purification. Cross reactivity is expected to occur with human, mouse, and rat based on sequence identity of the peptide immunogen. This antibody does not react with the MEK2 isoform.

Storage Condition
Store vial at -20° C prior to opening. This product is stable at 4° C as an undiluted liquid. For extended storage, aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Dilute only prior to immediate use.

Precautions Note
This product is for research use only and is not intended for therapeutic or diagnostic applications.

Anti-MEK1 (MOUSE) Monoclonal Antibody - 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.

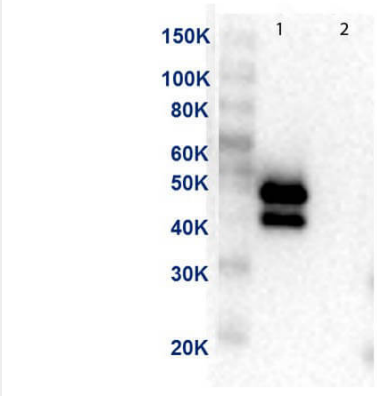
Anti-MEK1 (MOUSE) Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-MEK1 (MOUSE) Monoclonal Antibody - Images

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



Western Blot of Anti-MEK1 Antibody. Lane 1: MEK-1 recombinant protein. Lane 2: MEK-2 recombinant protein. Load: 50ng per lane. Primary Antibody: Anti-MEK1 supernatant clone neat over night at 4°C. Secondary Antibody: Anti-mouse HRP at 1:40,000 dilution.

Anti-MEK1 (MOUSE) Monoclonal Antibody - Background

MEK1 antibodies detect the MEK1 isoform. Mitogen-activated protein kinase kinase 1, also known as MKK or MEK1, is an integral component of the MAP kinase cascade that regulates cell growth and differentiation. This pathway also plays a key role in synaptic plasticity in the brain. Activated MEK 1 acts as a dual specificity kinase phosphorylating both a threonine and a tyrosine residue on MAP kinase. MEK1 and MEK2 are about 80% identical to each other, and nearly identical within the kinase domain. The MEK1 antibody is ideal for investigators involved in Neuroscience, Cell Signaling and Cancer Research.