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

MEK1 Antibody (S218/222)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7960h

Specification

MEK1 Antibody (S218/222) - Product Information

Application	**WB,E**
Primary Accession	Q02750
Other Accession	P36506, Q63932, Q90891, Q05116, Q01986, P29678, P31938, Q63980, Q24324
Reactivity	**Human**
Predicted	**Drosophila, Hamster, Mouse, Rabbit, Rat, Xenopus, Chicken**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**43439**
Antigen Region	**199-234**

MEK1 Antibody (S218/222) - Additional Information

Gene ID 5604

Other Names
Dual specificity mitogen-activated protein kinase kinase 1, MAP kinase kinase 1, MAPKK 1, MKK1, ERK activator kinase 1, MAPK/ERK kinase 1, MEK 1, MAP2K1, MEK1, PRKMK1

Target/Specificity
This MEK1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 199-234 amino acids from human MEK1.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
MEK1 Antibody (S218/222) is for research use only and not for use in diagnostic or therapeutic procedures.

MEK1 Antibody (S218/222) - 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.

MEK1 Antibody (S218/222) - 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

MEK1 Antibody (S218/222) - Images

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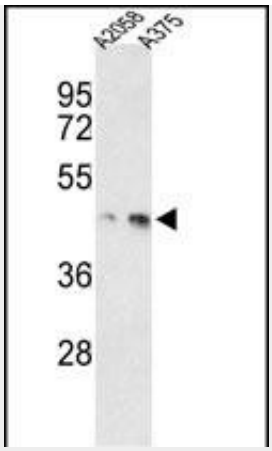
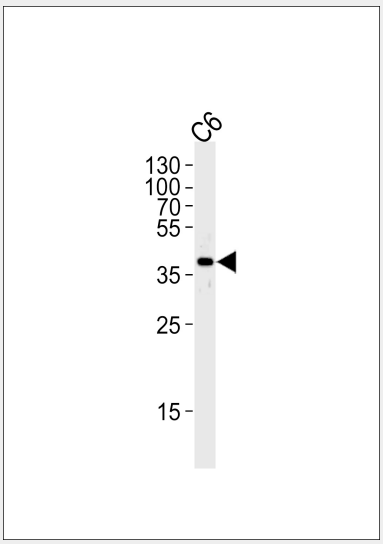


Western blot analysis of anti-MEK1 Antibody (S218/222) (Cat.#AP7960h) in A2058, A375 cell line lysates (35ug/lane). MEK1 (arrow) was detected using the purified Pab.



Western blot analysis of lysate from rat C6 cell line, using MEK1 Antibody (S218/222)(Cat. #AP7960h). AP7960h was diluted at 1:1000. A goat anti-rabbit IgG H&L(HRP) at 1:5000 dilution was used as the secondary antibody. Lysate at 35ug.

MEK1 Antibody (S218/222) - Background

MAP2K1 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 wide variety of extra- and intracellular signals. As an essential component of MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development.

MEK1 Antibody (S218/222) - References

Zheng, B., et al., Blood 102(3):1019-1027 (2003).
Li, S.P., et al., Cancer Res. 63(13):3473-3477 (2003).
Zhu, X., et al., J. Neurochem. 86(1):136-142 (2003).
Fringer, J., et al., J. Biol. Chem. 278(23):20612-20617 (2003).
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