

**MEK1/2 Antibody (S222) Blocking Peptide**  
Synthetic peptide  
Catalog # BP7904c**Specification****MEK1/2 Antibody (S222) Blocking Peptide -  
Product Information**Primary Accession [Q02750](#)  
Other Accession [P46734](#)**MEK1/2 Antibody (S222) Blocking Peptide -  
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**The synthetic peptide sequence used to  
generate the antibody [AP7904c](#)  
was selected from the S222 region of  
human MEK1/2 Antibody (S222). A 10 to  
100 fold molar excess to antibody is  
recommended. Precise conditions should be  
optimized for a particular assay.**Format**Peptides are lyophilized in a solid powder  
format. Peptides can be reconstituted in  
solution using the appropriate buffer as  
needed.**Storage**Maintain refrigerated at 2-8°C for up to 6  
months. For long term storage store at  
-20°C.**Precautions**This product is for research use only. Not  
for use in diagnostic or therapeutic  
procedures.**MEK1/2 Antibody (S222) Blocking Peptide -  
Protein Information****MEK1/2 Antibody (S222) Blocking Peptide  
- Background**MEK1 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.**MEK1/2 Antibody (S222) Blocking Peptide  
- 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).Witowsky, J.A., et al., J. Biol. Chem.  
278(3):1403-1406 (2003).

**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](http://www.uniprot.org/citations/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.

**MEK1/2 Antibody (S222) Blocking Peptide  
- Protocols**

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

- [Blocking Peptides](#)