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Phospho-Mek1/2 Antibody
Rabbit Polyclonal Antibody
Catalog # ABV10379

Specification

Phospho-Mek1/2 Antibody - Product Information

Application	**WB, IF**
Primary Accession	Q02750
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Calculated MW	**43439**

Phospho-Mek1/2 Antibody - Additional Information

Gene ID 5604

Application & Usage	**Western blotting (1:200-1000) and immunocytochemistry (1:100-200). However, the optimal concentrations should be determined individually. The antibody recognizes 45 kDa phospho-Mek1/2 (Ser217/221). It does not detect the unphosphorylated protein.**

Other Names
MAPK , Erk, Dual specificity mitogen-activated protein kinase kinase 1/2; MAP kinase kinase 1/2; MAPKK 1/2; ERK activator kinase 1/2; MAPK/ERK kinase 1/2; MEK 1/2

Target/Specificity
Phospho-Mek1/2

Antibody Form
Liquid

Appearance
Colorless liquid

Formulation
100 µl purified rabbit polyclonal antibody in phosphate-buffered saline (PBS) containing 50% glycerol, 1% BSA, and 0.02% sodium azide.

Handling
The antibody solution should be gently mixed before use.

Reconstitution & Storage
-20 °C

Background Descriptions

Precautions
Phospho-Mek1/2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-Mek1/2 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.

Phospho-Mek1/2 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

Phospho-Mek1/2 Antibody - Images

Phospho-Mek1/2 Antibody - Background

MAP kinase kinase 1 (Mek1), also known as mitogen activated protein kinase kinase, MAP kinase kinase, ERK kinase 1 or microtubule-associated protein 2 kinase, is a 43 kDa dual-specificity protein kinase that phosphorylates threonine and tyrosine residues on MAP kinases such as Erk 1 and 2. Mek1 and Mek2 are involved in a diverse array of cellular processes such as stress-activated response, apoptosis, cytokine-induced cell proliferation, and DNA recombination during meiosis. Mek1 and Mek2 are activated by phosphorylation on serine 218 and 222 by serine-threonine kinase, Raf-1, which is part of the p21ras signal transduction pathway.