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KD-Validated Anti-Phospho-MEK1 (S298) Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1596

Specification

KD-Validated Anti-Phospho-MEK1 (S298) Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q02750
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 43 kDa , observed , 45 kDa KDa**
Gene Name	**MAP2K1**
Aliases	**Mitogen-Activated Protein Kinase Kinase 1; MEK1; Dual Specificity Mitogen-Activated Protein Kinase Kinase 1; MAPK/ERK Kinase 1; MAPKK1; PRKMK1; MKK1; ERK Activator Kinase 1; MAP Kinase Kinase 1; EC 2.7.12.2; MAPKK 1; MEK 1; Protein Kinase, Mitogen-Activated, Kinase 1 (MAP Kinase Kinase 1); CFC3; MEL**
Immunogen	**A synthesized peptide derived from human Phospho-MEK1 (S298)**

KD-Validated Anti-Phospho-MEK1 (S298) Rabbit Monoclonal Antibody - 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 (HGNC:6840), MEK1, PRKMK1

KD-Validated Anti-Phospho-MEK1 (S298) Rabbit 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)

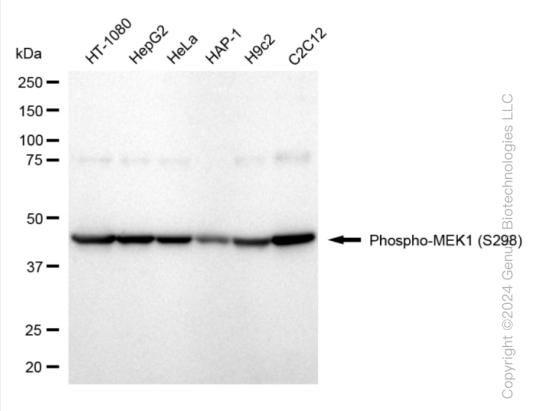
Tissue Location
Widely expressed, with extremely low levels in brain.

KD-Validated Anti-Phospho-MEK1 (S298) Rabbit 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

KD-Validated Anti-Phospho-MEK1 (S298) Rabbit Monoclonal Antibody - Images



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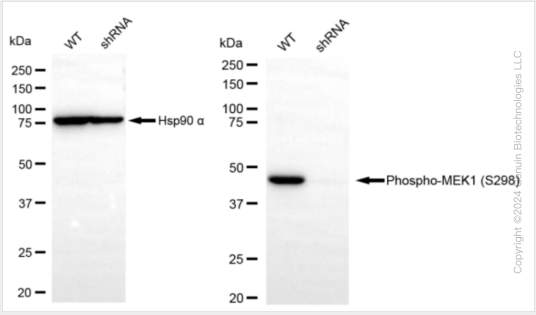
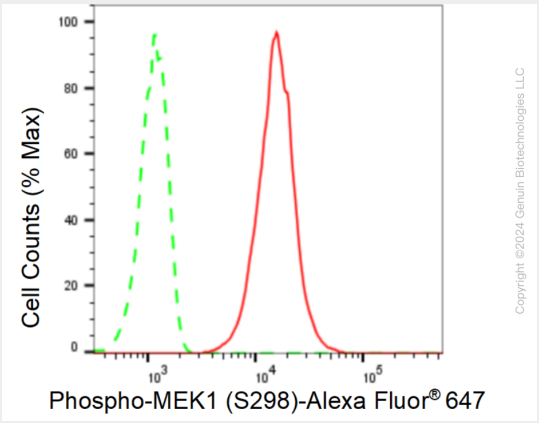
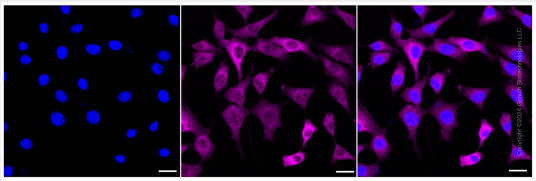
Western blotting analysis using anti-Phospho-MEK1 (S298) antibody (Cat#AGI1596). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-Phospho-MEK1 (S298) antibody (Cat#AGI1596, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-Phospho-MEK1 (S298) antibody (Cat#AGI1596). Phospho-MEK1 (S298) expression in wild type (WT) and Phospho-MEK1 (S298) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-Phospho-MEK1 (S298) antibody (Cat#AGI1596, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of Phospho-MEK1 (S298) expression in C2C12 cells using Phospho-MEK1 (S298) antibody (Cat#AGI1596, 1:2,000). Green, isotype control; red, Phospho-MEK1 (S298).



Immunocytochemical staining of C2C12 cells with anti-Phospho-MEK1 (S298) antibody (Cat#AGI1596, 1:1,000). Nuclei were stained blue with DAPI; Phospho-MEK1 (S298) was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.