abcam

Product datasheet

Anti-MEK1 + MEK2 antibody ab70613

1 References 2 Images

Overview

Product name	Anti-MEK1 + MEK2 antibody
Description	Rabbit polyclonal to MEK1 + MEK2
Host species	Rabbit
Specificity	ab70613 recognizes human MEK1 protein without phosphorylation at sites Ser 218/222 and MEK2 without phosphorylation at sites Ser 222/226. It does not cross react to phosphorylated MEK1/2.
Tested applications	**Suitable for:** WB, IP, ELISA
Species reactivity	**Reacts with:** Mouse, Rat, Chicken, Human
Immunogen	Synthetic peptide (Human) surrounding the epitope SMANS without phosphorylation.
Positive control	Whole cell lysates derived from 3T3 cells.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	Preservative: None Constituents: Tris buffered saline, pH 7.2 containing antibody stabilizer
Purity	Immunogen affinity purified
Purification notes	ab70613 is purified by site specific epitope affinity purification.
Clonality	Polyclonal
Isotype	IgG

Applications

Our Abpromise guarantee covers the use of **ab70613** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes

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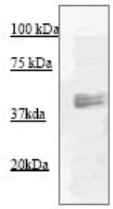
WB		Use a concentration of 0.1 - 1 µg/ml. Detects a band of approximately 44 kDa (predicted molecular weight: 44 kDa).
IP		Use a concentration of 2 - 5 µg/ml.
ELISA		Use a concentration of 0.01 - 0.1 µg/ml.

Target

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. 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.
Tissue specificity	Widely expressed, with extremely low levels in brain.
Involvement in disease	Cardiofaciocutaneous syndrome 3
Sequence similarities	Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase subfamily. Contains 1 protein kinase domain.
Domain	The proline-rich region localized between residues 270 and 307 is important for binding to RAF1 and activation of MAP2K1/MEK1.
Post-translational modifications	Phosphorylation at Ser-218 and Ser-222 by MAP kinase kinase kinases (RAF or MEKK1) positively regulates kinase activity. Also phosphorylated at Thr-292 by MAPK1/ERK2 and at Ser-298 by PAK. MAPK1/ERK2 phosphorylation of Thr-292 occurs in response to cellular adhesion and leads to inhibition of Ser-298 phosphorylation by PAK. Acetylation by Yersinia yopJ prevents phosphorylation and activation, thus blocking the MAPK signaling pathway.
Cellular localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, microtubule organizing center, spindle pole body. Cytoplasm. Nucleus. Localizes at centrosomes during prometaphase, midzone during anaphase and midbody during telophase/cytokinesis.

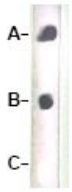
Images



Western blot - Anti-MEK1 + MEK2 antibody (ab70613)

Anti-MEK1 + MEK2 antibody (ab70613) at 1/1000 dilution + Whole cell lysates derived from 3T3

Predicted band size: 44 kDa
Observed band size: 44 kDa



Dot blot - Anti-MEK1 + MEK2 antibody (ab70613)

1 mg peptide was spotted onto NC membrane and blotted using ab70613 at 1/1000 dilution. A:MEK1/2 (pS218/222) B: MEK1/2 (Non-phosphorylated), C: Non-related phosphospecific PP.

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