

ARG65359 anti-MEK1 / 2 antibody

Package: 50 µg, 25 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes MEK1 / 2
Tested Reactivity	Hu
Tested Application	WB
Specificity	The polyclonal antibody reacts with MEK 1/2. MEK 1 and MEK 2 are integral components of the MAP kinase cascade, an important pathway for cell growth and differentiation.
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	MEK1 / 2
Species	Human
Immunogen	Synthetic peptide (coupled with KLH) derived from aminoacid sequence 33-53 of human MAPK Kinase 1. The immunogen sequence is highly conserved within species (human, mouse, rat, hamster, bovine etc.).
Conjugation	Un-conjugated
Alternate Names	MEK 1; PRKMK1; MAPKK 1; EC 2.7.12.2; MEK1; MAPKK1; MKK1; Dual specificity mitogen-activated protein kinase kinase 1; MAP kinase kinase 1; MAPK/ERK kinase 1; CFC3; ERK activator kinase 1

Application Instructions

Application table	Application	Dilution
	WB	0.5 µg/ml
Application Note	WB: Sample preparation: Resuspend approx. 50 mil. cells in 1 ml cold Lysis buffer (1% laurylmaltoside in 20 mM Tris/Cl, 100 mM NaCl pH 8.2, 50 mM NaF including Protease inhibitor Cocktail). Incubate 60 min on ice. Centrifuge to remove cell debris. Mix lysate with non-reducing/reducing Laemmli SDS-PAGE sample buffer. Boil for 5 min. Application note: Both reducing and non-reducing condition. Reducing condition are recommended. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	Raji	

Properties

Form	Liquid
Purification	Purified from rabbit serum by immunoaffinity chromatography.
Purity	> 95% (by SDS-PAGE)
Buffer	PBS, 15 mM Sodium azide and 0.2% (w/v) high-grade protease free BSA

Preservative	15 mM Sodium azide
Stabilizer	0.2% (w/v) high-grade protease free BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Database links	GeneID: 5604 Human Swiss-port # Q02750 Human
Gene Symbol	MAP2K1
Gene Full Name	mitogen-activated protein kinase kinase 1
Background	MEK (MAPKK, kinase of mitogen-activated protein kinase) is the medium one of three components of MAP kinase cascade – an important signaling pathway that regulates cell growth and differentiation. Raf (MAPKKK) activates MEK 1 and 2 via phosphorylation of two serine residues (Ser218 and Ser222). Activated MEK 1/2 then acts as a dual specificity kinase phosphorylating both a threonine and a tyrosine residue on ERK (MAPK, mitogen-activated protein kinase). This phosphorylation of ERK by MEK 1/2 is a critical step in the MAP kinase cascade. Phosphorylated ERK is capable of translocating to the nucleus, where it regulates gene expression by activating transcription factors.
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. [UniProt]
Research Area	Signaling Transduction antibody
Calculated Mw	43 kDa
PTM	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.