ARG41974
anti-MEK3 + MEK6 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes MEK3 + MEK6
Tested Reactivity	Hu, Rat
Tested Application	IP, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Target Name	MEK3 + MEK6
Species	Human
Immunogen	Purified recombinant protein fragment of Human MEK6.
Conjugation	Un-conjugated
Alternate Names	MEK3: SAPK kinase 2; MEK 3; MAPKK 3; Stress-activated protein kinase kinase 2; PRKMK3; EC 2.7.12.2; MAPK/ERK kinase 3; MAPKK3; SAPKK2; SAPKK-2; MAP kinase kinase 3; MKK3; Dual specificity mitogen-activated protein kinase kinase 3 MEK6: SAPK kinase 3; MEK 6; MAPKK 6; MAPK/ERK kinase 6; EC 2.7.12.2; PRKMK6; SAPKK3; MAPKK6; SAPKK-3; Stress-activated protein kinase kinase 3; MKK6; MAP kinase kinase 6; Dual specificity mitogen-activated protein kinase kinase 6

Application Instructions

Application table

Application	Dilution
IP	Assay-dependent
WB	1:1000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Positive Control	HeLa
Observed Size	~ 39 kDa

Properties

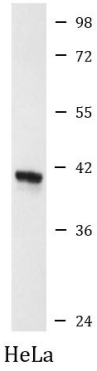
Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.4), 0.03% Proclin 300 and 50% Glycerol.
Preservative	0.03% Proclin 300
Stabilizer	50% Glycerol

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. 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

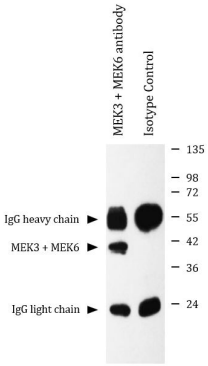
Gene Symbol	MAP2K3; MAP2K6
Gene Full Name	mitogen-activated protein kinase kinase 3 mitogen-activated protein kinase kinase 6
Background	MEK3: The protein encoded by this gene is a dual specificity protein kinase that belongs to the MAP kinase kinase family. This kinase is activated by mitogenic and environmental stress, and participates in the MAP kinase-mediated signaling cascade. It phosphorylates and thus activates MAPK14/p38-MAPK. This kinase can be activated by insulin, and is necessary for the expression of glucose transporter. Expression of RAS oncogene is found to result in the accumulation of the active form of this kinase, which thus leads to the constitutive activation of MAPK14, and confers oncogenic transformation of primary cells. The inhibition of this kinase is involved in the pathogenesis of Yersina pseudotuberculosis. Multiple alternatively spliced transcript variants that encode distinct isoforms have been reported for this gene. [provided by RefSeq, Jul 2008] MEK6: This gene encodes a member of the dual specificity protein kinase family, which functions 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 phosphorylates and activates p38 MAP kinase in response to inflammatory cytokines or environmental stress. As an essential component of p38 MAP kinase mediated signal transduction pathway, this gene is involved in many cellular processes such as stress induced cell cycle arrest, transcription activation and apoptosis. [provided by RefSeq, Jul 2008]
Function	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. With MAP3K3/MKK3, catalyzes the concomitant phosphorylation of a threonine and a tyrosine residue in the MAP kinases p38 MAPK11, MAPK12, MAPK13 and MAPK14 and plays an important role in the regulation of cellular responses to cytokines and all kinds of stresses. Especially, MAP2K3/MKK3 and MAP2K6/MKK6 are both essential for the activation of MAPK11 and MAPK13 induced by environmental stress, whereas MAP2K6/MKK6 is the major MAPK11 activator in response to TNF. MAP2K6/MKK6 also phosphorylates and activates PAK6. The p38 MAP kinase signal transduction pathway leads to direct activation of transcription factors. Nuclear targets of p38 MAP kinase include the transcription factors ATF2 and ELK1. Within the p38 MAPK signal transduction pathway, MAP3K6/MKK6 mediates phosphorylation of STAT4 through MAPK14 activation, and is therefore required for STAT4 activation and STAT4-regulated gene expression in response to IL-12 stimulation. The pathway is also crucial for IL-6-induced SOCS3 expression and down-regulation of IL-6-mediated gene induction; and for IFNG-dependent gene transcription. Has a role in osteoclast differentiation through NF-kappa-B transactivation by TNFSF11, and in endochondral ossification and since SOX9 is another likely downstream target of the p38 MAPK pathway. MAP2K6/MKK6 mediates apoptotic cell death in thymocytes. Acts also as a regulator for melanocytes dendricity, through the modulation of Rho family GTPases. [UniProt]
Calculated Mw	MEK3: 39 kDa MEK6: 37 kDa
PTM	MEK3: Autophosphorylated. Phosphorylation on Ser-218 and Thr-222 by MAP kinase kinase kinases regulates positively the kinase activity (PubMed:8622669). Phosphorylated by TAOK2 (PubMed:11279118). Yersinia yopJ may acetylate Ser/Thr residues, preventing phosphorylation and activation, thus blocking the MAPK signaling pathway. [UniProt] MEK6: Weakly autophosphorylated. Phosphorylated at Ser-207 and Thr-211 by the majority of M3Ks, such as MAP3K5/ASK1, MAP3K1/MEKK1, MAP3K2/MEKK2, MAP3K3/MEKK3, MAP3K4/MEKK4, MAP3K7/TAK1, MAP3K11/MLK3 and MAP3K17/TAOK2. Acetylation of Ser-207 and Thr-211 by Yersinia yopJ prevents phosphorylation and activation, thus blocking the MAPK signaling pathway. [UniProt]
Cellular Localization	MEK6: Nucleus. Cytoplasm. Cytoplasm, cytoskeleton. Note=Binds to microtubules. [UniProt]

Images



ARG41974 anti-MEK3 + MEK6 antibody WB image

Western blot: HeLa cell lysate stained with ARG41974 anti-MEK3 + MEK6 antibody at 1:1000 dilution.



ARG41974 anti-MEK3 + MEK6 antibody IP image

Immunoprecipitation: HeLa cell lysate stained with ARG41974 anti-MEK3 + MEK6 antibody.