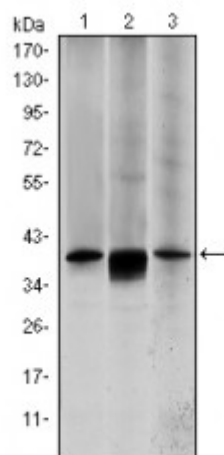


Anti-MEK-6 antibody



Description	Mouse monoclonal to MEK-6.
Model	STJ98241
Host	Mouse
Reactivity	Human, Mouse
Applications	ELISA, IHC, WB
Immunogen	Purified recombinant fragment of human MEK-6 expressed in E. Coli.
Gene ID	5608
Gene Symbol	MAP2K6
Dilution range	WB 1:500-1:2000IHC 1:200-1:1000ELISA 1:10000
Specificity	MEK-6 Monoclonal Antibody detects endogenous levels of MEK-6 protein.
Tissue Specificity	Isoform 2 is only expressed in skeletal muscle. Isoform 1 is expressed in skeletal muscle, heart, and in lesser extent in liver or pancreas.
Purification	Affinity purification
Clone ID	3H12B9
Note	For Research Use Only (RUO).
Protein Name	Dual specificity mitogen-activated protein kinase kinase 6 MAP kinase kinase 6 MAPKK 6 MAPK/ERK kinase 6 MEK 6 Stress-activated protein kinase kinase 3 SAPK kinase 3 SAPKK-3 SAPKK3
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgG1
Formulation	Ascitic fluid containing 0.03% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6846OMIM:601254
Alternative Names	Dual specificity mitogen-activated protein kinase kinase 6 MAP kinase kinase 6 MAPKK 6 MAPK/ERK kinase 6 MEK 6 Stress-activated protein kinase kinase 3 SAPK kinase 3 SAPKK-3 SAPKK3
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.
Sequence and Domain Family	The DVD domain (residues 311-334) contains a conserved docking site and is found in the mammalian MAP kinase kinases (MAP2Ks). The DVD sites bind to their specific upstream MAP kinase kinase kinases (MAP3Ks) and are essential for activation. The D domain (residues 4-19) contains a conserved docking site and is required for the binding to MAPK substrates.
Cellular Localization	Nucleus Cytoplasm Cytoplasm, cytoskeleton. Binds to microtubules.
Post-translational Modifications	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.