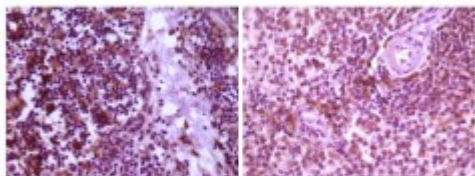


Anti-MEK-4 antibody



Description	Mouse monoclonal to MEK-4.
Model	STJ98238
Host	Mouse
Reactivity	Human
Applications	ELISA, IHC
Immunogen	Purified recombinant fragment of MEK-4 expressed in E. Coli.
Gene ID	6416
Gene Symbol	MAP2K4
Dilution range	IHC 1:200-1:1000ELISA 1:10000
Specificity	MEK-4 Monoclonal Antibody detects endogenous levels of MEK-4 protein.
Tissue Specificity	Abundant expression is seen in the skeletal muscle. It is also widely expressed in other tissues.
Purification	Affinity purification
Clone ID	2D10D8 / 4G11B2 / 2D10C4 / 2D10C3
Note	For Research Use Only (RUO).
Protein Name	Dual specificity mitogen-activated protein kinase kinase 4 MAP kinase kinase 4 MAPKK 4 JNK-activating kinase 1 MAPK/ERK kinase 4 MEK 4 SAPK/ERK kinase 1 SEK1 Stress-activated protein kinase kinase 1 SA
Clonality	Monoclonal
Conjugation	Unconjugated

Isotype	IgM
Formulation	Ascitic fluid containing 0.03% sodium azide.
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:6844OMIM:601335
Alternative Names	Dual specificity mitogen-activated protein kinase kinase 4 MAP kinase kinase 4 MAPKK 4 JNK-activating kinase 1 MAPK/ERK kinase 4 MEK 4 SAPK/ERK kinase 1 SEK1 Stress-activated protein kinase kinase 1 SA
Function	Dual specificity protein kinase which acts as an essential component of the MAP kinase signal transduction pathway. Essential component of the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. With MAP2K7/MKK7, is the one of the only known kinase to directly activate the stress-activated protein kinase/c-Jun N-terminal kinases MAPK8/JNK1, MAPK9/JNK2 and MAPK10/JNK3. MAP2K4/MKK4 and MAP2K7/MKK7 both activate the JNKs by phosphorylation, but they differ in their preference for the phosphorylation site in the Thr-Pro-Tyr motif. MAP2K4 shows preference for phosphorylation of the Tyr residue and MAP2K7/MKK7 for the Thr residue. The phosphorylation of the Thr residue by MAP2K7/MKK7 seems to be the prerequisite for JNK activation at least in response to proinflammatory cytokines, while other stimuli activate both MAP2K4/MKK4 and MAP2K7/MKK7 which synergistically phosphorylate JNKs. MAP2K4 is required for maintaining peripheral lymphoid homeostasis. The MKK/JNK signaling pathway is also involved in mitochondrial death signaling pathway, including the release cytochrome c, leading to apoptosis. Whereas MAP2K7/MKK7 exclusively activates JNKs, MAP2K4/MKK4 additionally activates the p38 MAPKs MAPK11, MAPK12, MAPK13 and MAPK14.
Sequence and Domain Family	The DVD domain (residues 364-387) 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 34-52) contains a conserved docking site and is required for the binding to MAPK substrates.
Cellular Localization	Cytoplasm Nucleus
Post-translational Modifications	Activated by phosphorylation on Ser-257 and Thr-261 by MAP kinase kinase kinases (MAP3Ks).