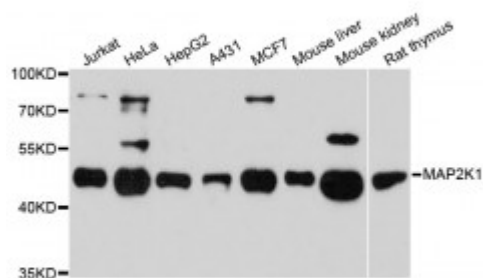


Anti-MAP2K1 Antibody



Description

The protein encoded by this gene is a member of the dual specificity protein kinase family, which acts 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 kinase lies upstream of MAP kinases and stimulates the enzymatic activity of MAP kinases upon wide variety of extra- and intracellular signals. As an essential component of MAP kinase signal transduction pathway, this kinase is involved in many cellular processes such as proliferation, differentiation, transcription regulation and development.

Model	STJ114560
Host	Rabbit
Reactivity	Human, Mouse, Rat
Applications	WB
Immunogen	A synthetic peptide corresponding to a sequence within amino acids 1-100 of human MAP2K1 (NP_002746.1).
Gene ID	5604
Gene Symbol	MAP2K1
Dilution range	WB 1:1000 - 1:3000
Tissue Specificity	Widely expressed, with extremely low levels in brain
Purification	Affinity purification
Note	For Research Use Only (RUO).

Protein Name	Dual specificity mitogen-activated protein kinase kinase 1 MAP kinase kinase 1 MAPKK 1 MKK1
Molecular Weight	43.439 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:6840 OMIM:176872 Reactome:R-HSA-110056
Alternative Names	Dual specificity mitogen-activated protein kinase kinase 1 MAP kinase kinase 1 MAPKK 1 MKK1
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,
Cellular Localization	Cytoplasm, cytoskeleton, microtubule organizing center, centrosome,
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,