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MAP2K6 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1518a

Product Information

Application	WB, IHC, E
Primary Accession	P52564
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	3H12B9
Isotype	IgG1
Calculated MW	37492
Description	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. Tissue specificity: Isoform 2 is only expressed in skeletal muscle. Isoform 1, on the other hand, is found in skeletal muscle, heart, and in lesser extent in liver or pancreas.
Immunogen	Purified recombinant fragment of human MAP2K6 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	5608
Other Names	Dual specificity mitogen-activated protein kinase kinase 6, MAP kinase kinase 6, MAPKK 6, 2.7.12.2, MAPK/ERK kinase 6, MEK 6, Stress-activated protein kinase kinase 3, SAPK kinase 3, SAPKK-3, SAPKK3, MAP2K6, MEK6, MKK6, PRKMK6, SKK3
Dilution	WB~~1/500 - 1/2000 IHC~~1/500 - 1/2000 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	MAP2K6 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MAP2K6
Synonyms	MEK6, MKK6, PRKMK6, SKK3
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.
Cellular Location	Nucleus. Cytoplasm. Cytoplasm, cytoskeleton. Note=Binds to microtubules
Tissue Location	Isoform 2 is only expressed in skeletal muscle. Isoform 1 is expressed in skeletal muscle, heart, and in lesser extent in liver or pancreas.

References

1. J Mol Med. 2008 Apr;86(4):485-90. 2. Blood. 2007 Jan 1;109(1):185-93.

Images

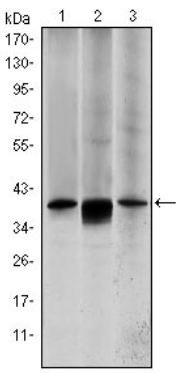


Figure 1: Western blot analysis using MAP2K6 mouse mAb against HepG2 (1), MCF-7 (2) and NIH/3T3 (3) cell lysate.

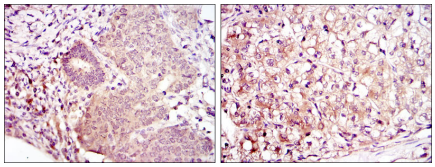


Figure 2: Immunohistochemical analysis of paraffin-embedded ovarian cancer (left) and kidney cancer (right) using MAP2K6 mouse mAb with DAB staining.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.