

MAPK10 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1172a**Specification**

MAPK10 Antibody - Product Information

Application	WB, IF
Primary Accession	P53779
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Calculated MW	53kDa KDa

Description

MAPK10: mitogen-activated protein kinase 10, also known as JNK3, JNK3A, PRKM10, p54bSAPK. Entrez Protein NP_002744. It is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This protein is a neuronal-specific form of c-Jun N-terminal kinases (JNKs). Through its phosphorylation and nuclear localization, this kinase plays regulatory roles in the signaling pathways during neuronal apoptosis. Beta-arrestin 2, a receptor-regulated MAP kinase scaffold protein, is found to interact with, and stimulate the phosphorylation of this kinase by MAP kinase kinase 4 (MKK4). Cyclin-dependent kinase 5 can phosphorylate, and inhibit the activity of this kinase, which may be important in preventing neuronal apoptosis. Four alternatively spliced transcript variants encoding distinct isoforms have been reported.

Immunogen

Purified recombinant fragment of human MAPK10 (aa28-233) expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

MAPK10 Antibody - Additional Information

Gene ID 5602

Other Names

Mitogen-activated protein kinase 10, MAP kinase 10, MAPK 10, 2.7.11.24, MAP kinase p49 3F12, Stress-activated protein kinase 1b, SAPK1b, Stress-activated protein kinase JNK3, c-Jun N-terminal kinase 3, MAPK10, JNK3, JNK3A, PRKM10, SAPK1B

Dilution

WB~~1/500 - 1/2000

IF~~1/200 - 1/1000

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

MAPK10 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

MAPK10 Antibody - Protein Information

Name MAPK10

Synonyms JNK3, JNK3A, PRKM10, SAPK1B

Function

Serine/threonine-protein kinase involved in various processes such as neuronal proliferation, differentiation, migration and programmed cell death. Extracellular stimuli such as pro-inflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/JNK) signaling pathway. In this cascade, two dual specificity kinases MAP2K4/MKK4 and MAP2K7/MKK7 phosphorylate and activate MAPK10/JNK3. In turn, MAPK10/JNK3 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. Plays regulatory roles in the signaling pathways during neuronal apoptosis. Phosphorylates the neuronal microtubule regulator STMN2. Acts in the regulation of the amyloid-beta precursor protein/APP signaling during neuronal differentiation by phosphorylating APP. Participates also in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-BMAL1 heterodimer and plays a role in the photic regulation of the circadian clock (PubMed:22441692). Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1 (PubMed:22327296).

Cellular Location

Cytoplasm. Membrane; Lipid-anchor. Nucleus Mitochondrion. Note=Palmitoylation regulates MAPK10 trafficking to cytoskeleton. Recruited to the mitochondria in the presence of SARM1 (By similarity).

Tissue Location

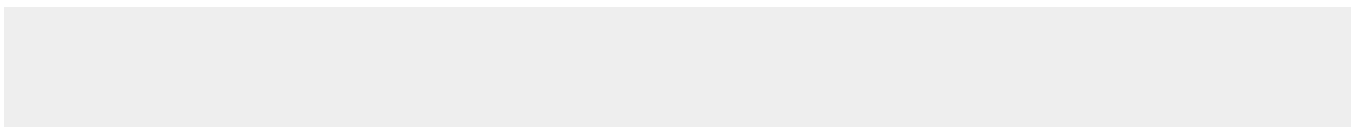
Specific to a subset of neurons in the nervous system. Present in the hippocampus and areas, cerebellum, striatum, brain stem, and weakly in the spinal cord. Very weak expression in testis and kidney

MAPK10 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

MAPK10 Antibody - Images



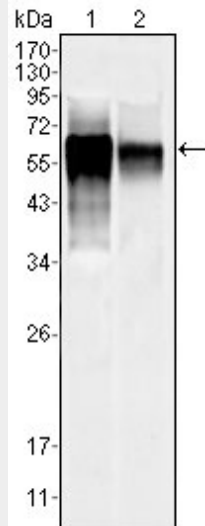


Figure 1: Western blot analysis using MAPK10 mouse mAb against NIH/3T3 (1) and SKN-SH (2) cell lysate.

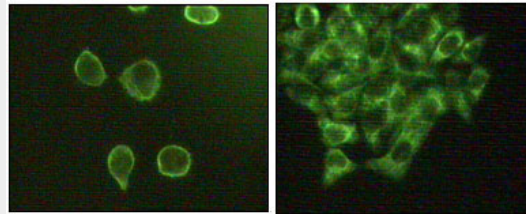


Figure 2: Immunofluorescence staining of methanol-fixed A431 (left) and HeLa (right) cells showing cytoplasmic and membrane localization.

MAPK10 Antibody - References

1. Blood. 2002 Oct 1;100(7):2546-53
2. J Leukoc Biol. 2003 May;73(5):682
3. Exp Neurol. 2004 Aug;188(2):246