

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

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**MAPK10 Antibody - Product Information**

Application	<b>WB, IF</b>
Primary Accession	<a href="#">P53779</a>
Reactivity	<b>Human, Mouse</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>IgG1</b>
Calculated MW	<b>53kDa KDa</b>

**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:<a href="http://www.uniprot.org/citations/22441692" target="\_blank">22441692</a>). Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1 (PubMed:<a href="http://www.uniprot.org/citations/22327296" target="\_blank">22327296</a>).

### 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

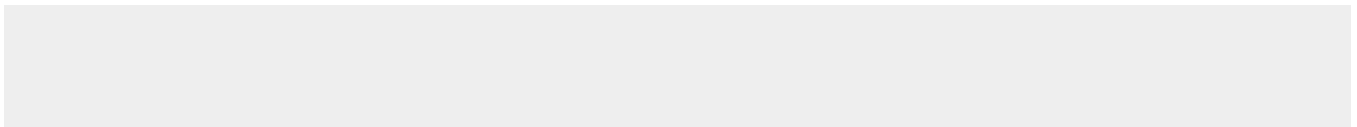
Specific to a subset of neurons in the nervous system. Present in the hippocampus and areas, cerebellum, striatum, brain stem, and weakly in the spinal cord. Very weak expression in testis and kidney

## 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



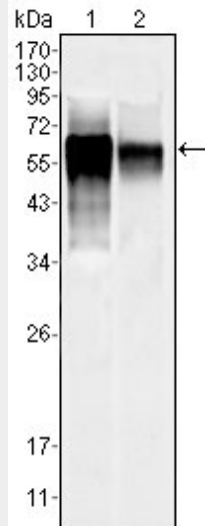


Figure 1: Western blot analysis using MAPK10 mouse mAb against NIH/3T3 (1) and SKN-SH (2) cell lysate.

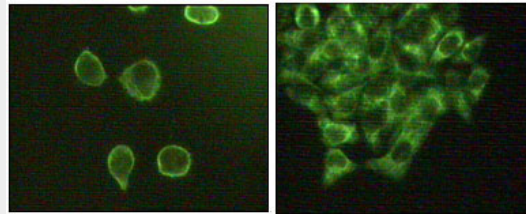


Figure 2: Immunofluorescence staining of methanol-fixed A431 (left) and HeLa (right) cells showing cytoplasmic and membrane localization.

### 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