

**Mouse Monoclonal Antibody to MAPK10**  
**Purified Mouse Monoclonal Antibody**  
**Catalog # AO2372a****Specification**

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**Mouse Monoclonal Antibody to MAPK10 - Product Information**

Application	<b>E, WB</b>
Primary Accession	<a href="#">P53779</a>
Reactivity	<b>Human, Rat</b>
Host	<b>Mouse</b>
Clonality	<b>Monoclonal</b>
Isotype	<b>Mouse IgG2a</b>
Calculated MW	<b>52.6kDa KDa</b>

**Description**

The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as integration points for multiple biochemical signals and are involved in a wide variety of cellular processes, such as proliferation, differentiation, transcription regulation and development. This kinase is specifically expressed in a subset of neurons in the nervous system and is activated by threonine and tyrosine phosphorylation. Targeted deletion of this gene in mice suggests that it may have a role in stress-induced neuronal apoptosis. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. A recent study provided evidence for translational readthrough in this gene and expression of an additional C-terminally extended isoform via the use of an alternative in-frame translation termination codon.;

**Immunogen**

Purified recombinant fragment of human MAPK10 (AA: 180-329) expressed in E. Coli.

**Formulation**

Purified antibody in PBS with 0.05% sodium azide

**Application Note**

ELISA: 1/10000; WB: 1/500 - 1/2000;

**Mouse Monoclonal Antibody to MAPK10 - Additional Information**

**Gene ID** 5602

**Other Names**

JNK3; JNK3A; PRKM10; SAPK1b; p493F12; p54bSAPK

**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**

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

## Mouse Monoclonal Antibody to MAPK10 - 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

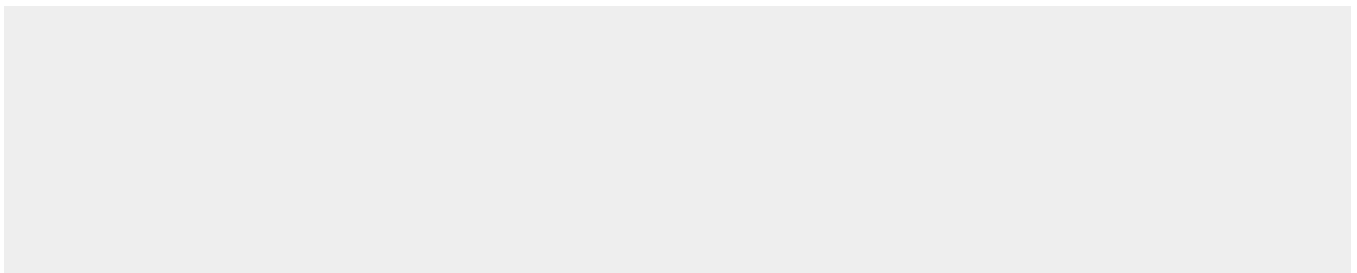
Specific to a subset of neurons in the nervous system. Present in the hippocampus and areas, cerebellum, striatum, brain stem, and weakly in the spinal cord. Very weak expression in testis and kidney

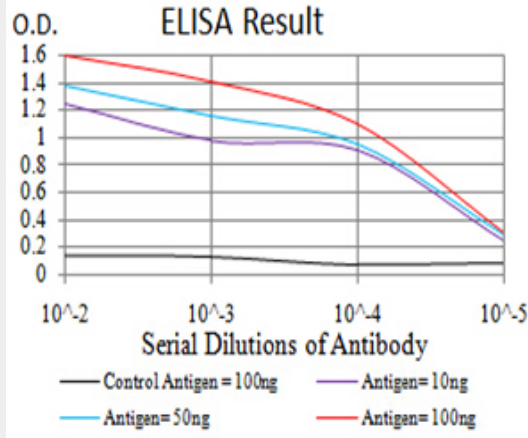
## Mouse Monoclonal Antibody to MAPK10 - Protocols

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

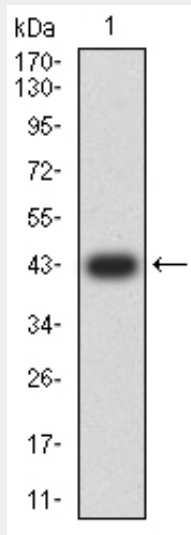
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Mouse Monoclonal Antibody to MAPK10 - Images

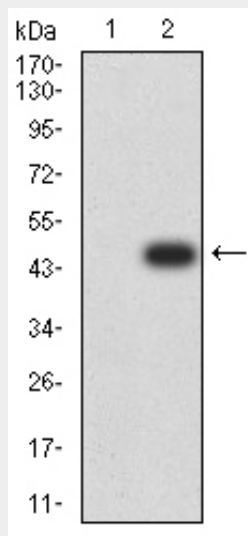




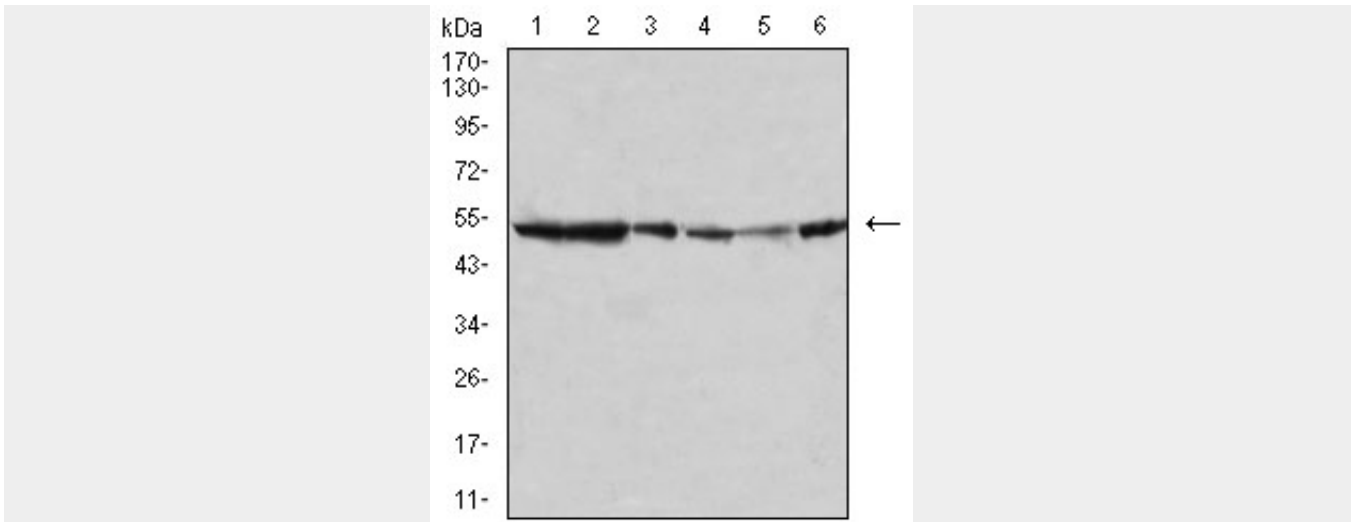
Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



Western blot analysis using MAPK10 mAb against human MAPK10 (AA: 180-329) recombinant protein. (Expected MW is 43.1 kDa)



Western blot analysis using MAPK10 mAb against HEK293 (1) and MAPK10 (AA: 180-329)-hIgGFc transfected HEK293 (2) cell lysate.



Western blot analysis using MAPK10 mouse mAb against HEK293 (1), HeLa (2), SK-N-SH (3), MCF-7 (4), Jurkat (5), and C6 (6) cell lysate.

#### Mouse Monoclonal Antibody to MAPK10 - References

1. J Diabetes Res. 2014;2014:814854. ; 2. Pathol Int. 2011 Jan;61(1):52-4.;