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

Specification

Mouse Monoclonal Antibody to MAPK10 - Product Information

Application	**WB, E**
Primary Accession	P53779
Reactivity	**Human, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG2a**
Calculated MW	**52.6kDa KDa**

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

Dilution
WB~~1:1000
E~~N/A

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. Also participates 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

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 Cytomety
- Cell Culture

Mouse Monoclonal Antibody to MAPK10 - Images

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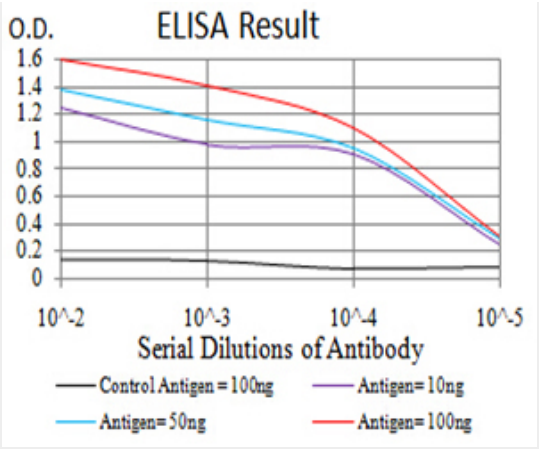
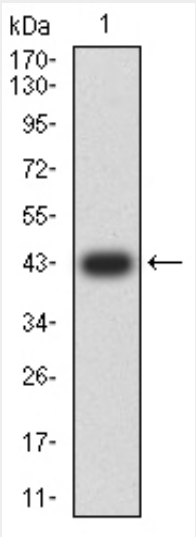
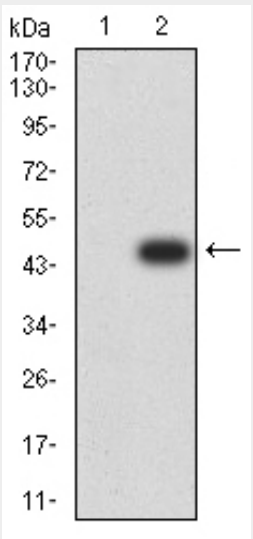


Black line: Control Antigen (100 ng);Purple line: Antigen (10ng); Blue line: Antigen (50 ng); Red line:Antigen (100 ng)



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.

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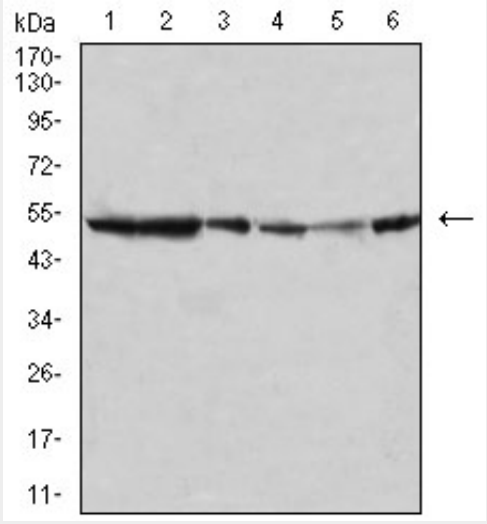

Western blot analysis using MAPK10 mouse mAb against HEK293 (1), Hela (2), SK-N-SH (3), MCF-7 (4), Jurkat (5), and C6 (6) cell lysate.

Mouse Monoclonal Antibody to MAPK10 - References

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