

**MAPK10 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7222a**

**Specification**

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**MAPK10 Antibody (N-term) - Product Information**

Application	<b>WB, IHC-P,E</b>
Primary Accession	<a href="#">P53779</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>Rabbit IgG</b>
Antigen Region	<b>7-34</b>

**MAPK10 Antibody (N-term) - Additional Information**

**Gene ID** 5602

**Other Names**

Mitogen-activated protein kinase 10, MAP kinase 10, MAPK 10, 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

**Target/Specificity**

This MAPK10 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 7-34 amino acids from the N-terminal region of human MAPK10.

**Dilution**

WB~~1:1000

IHC-P~~1:25

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

MAPK10 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**MAPK10 Antibody (N-term) - 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

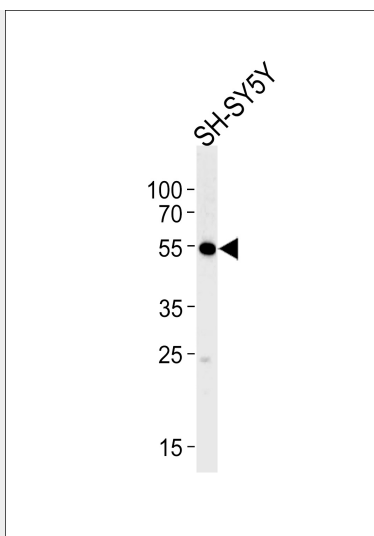
### **MAPK10 Antibody (N-term) - Protocols**

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

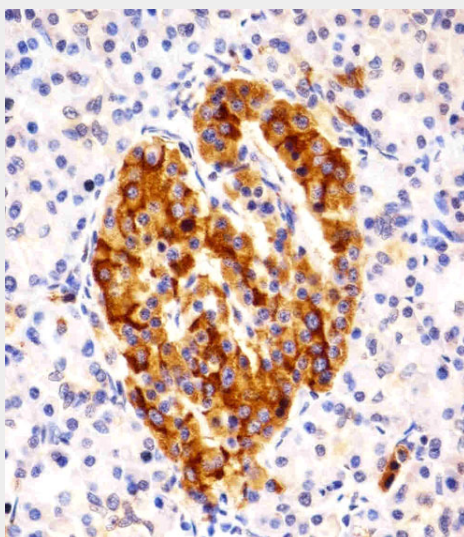
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

### **MAPK10 Antibody (N-term) - Images**





MAPK10 Antibody (C21) (Cat.# AP7222a) western blot analysis in SH-SY5Y cell line lysates (35ug/lane). This demonstrates the MAPK10 antibody detected the MAPK10 protein (arrow).



Immunohistochemical analysis of paraffin-embedded H. pancreas section using MAPK10 Antibody (N-term)(Cat#AP7222a). AP7222a was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

#### **MAPK10 Antibody (N-term) - Background**

MAPK10 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.

#### **MAPK10 Antibody (N-term) - References**

Li, B.S., et al., EMBO J. 21(3):324-333 (2002).

Yoshida, S., et al., J. Hum. Genet. 47(11):614-619 (2002).

McDonald, P.H., et al., Science 290(5496):1574-1577 (2000).

Yang, D.D., et al., Nature 389(6653):865-870 (1997).

Gupta, S., et al., EMBO J. 15(11):2760-2770 (1996).

**MAPK10 Antibody (N-term) - Citations**

- [c-Jun N-terminal kinase 3 deficiency protects axotomized retinal ganglion cells affecting mitochondria involved apoptosis pathway.](#)