

MAPK10 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7222a**Specification****MAPK10 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [P53779](#)**MAPK10 Antibody (N-term) Blocking Peptide - 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

The synthetic peptide sequence used to generate the antibody [AP7222a](#) was selected from the N-term region of human MAPK10. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

MAPK10 Antibody (N-term) Blocking Peptide - Protein Information**MAPK10 Antibody (N-term) Blocking Peptide - 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) Blocking Peptide - 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).

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 proinflammatory 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-ARNTL/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) Blocking
Peptide - Protocols**

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

- [Blocking Peptides](#)