

MAPK9 / JNK2 / SAPK Antibody (N-Terminus)

Rabbit Polyclonal Antibody Catalog # ALS11956

Specification

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - Product Information

Application IHC
Primary Accession P45984
Reactivity Human
Host Rabbit
Clonality Polyclonal
Calculated MW 48kDa KDa

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - Additional Information

Gene ID 5601

Other Names

Mitogen-activated protein kinase 9, MAP kinase 9, MAPK 9, 2.7.11.24, JNK-55, Stress-activated protein kinase 1a, SAPK1a, Stress-activated protein kinase JNK2, c-Jun N-terminal kinase 2, MAPK9, JNK2, PRKM9, SAPK1A

Target/Specificity

synthetic peptide corresponding to N-terminal residues of human MAPK9(Mitogen-activated protein kinase 9)

Reconstitution & Storage

Long term: -20°C; Short term: +4°C. Avoid repeat freeze-thaw cycles.

Precautions

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) is for research use only and not for use in diagnostic or therapeutic procedures.

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - Protein Information

Name MAPK9

Synonyms JNK2, PRKM9, SAPK1A

Function

Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation 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 MAPK9/JNK2. In turn, MAPK9/JNK2 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. In response to oxidative or ribotoxic stresses, inhibits rRNA synthesis by phosphorylating and inactivating the RNA polymerase 1- specific



transcription initiation factor RRN3. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including TP53 and YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Upon T-cell receptor (TCR) stimulation, is activated by CARMA1, BCL10, MAP2K7 and MAP3K7/TAK1 to regulate JUN protein levels. Plays an important role in the osmotic stress-induced epithelial tight-junctions disruption. When activated, promotes beta-catenin/CTNNB1 degradation and inhibits the canonical Wnt signaling pathway. Participates also in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-BMAL1 heterodimer and plays a role in the regulation of the circadian clock (PubMed:22441692). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteasomal degradation (By similarity).

Cellular Location

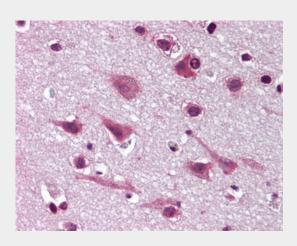
Cytoplasm. Nucleus. Note=Colocalizes with POU5F1 in the nucleus. {ECO:0000250|UniProtKB:Q9WTU6}

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- Immunofluorescence
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - Images



Anti-MAPK9 / JNK2 antibody IHC of human brain, cortex.

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - Background

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Tel: 858.875.1900 Fax: 858.875.1999

ATF2 and thus regulates AP-1 transcriptional activity. In response to oxidative or ribotoxic stresses, inhibits rRNA synthesis by phosphorylating and inactivating the RNA polymerase 1-specific transcription initiation factor RRN3. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including TP53 and YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Upon T-cell receptor (TCR) stimulation, is activated by CARMA1, BCL10, MAP2K7 and MAP3K7/TAK1 to regulate JUN protein levels. Plays an important role in the osmotic stress-induced epithelial tight-junctions disruption. When activated, promotes beta-catenin/CTNNB1 degradation and inhibits the canonical Wnt signaling pathway. Participates also in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-ARNTL/BMAL1 heterodimer and plays a role in the regulation of the circadian clock (PubMed:22441692).

MAPK9 / JNK2 / SAPK Antibody (N-Terminus) - References

Sluss H.K., et al. Mol. Cell. Biol. 14:8376-8384(1994). Kallunki T., et al. Genes Dev. 8:2996-3007(1994). Gupta S., et al. EMBO J. 15:2760-2770(1996). Wang P., et al. BMB Rep. 43:738-743(2010). Halleck A., et al. Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.