

JNK2 Polyclonal Antibody

Catalog # AP70625

Specification

JNK2 Polyclonal Antibody - Product Information

Application Primary Accession Reactivity Host Clonality WB, IHC-P P45984 Human, Mouse, Rat Rabbit Polyclonal

JNK2 Polyclonal Antibody - Additional Information

Gene ID 5601

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

Dilution WB~~Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/10000. Not yet tested in other applications. IHC-P~~N/A

Format Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.09% (W/V) sodium azide.

Storage Conditions -20°C

JNK2 Polyclonal Antibody - Protein Information

Name MAPK9

Synonyms JNK2, PRKM9, SAPK1A

Function

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Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death (PubMed:<a href="http://www.uniprot.org/citations/10376527" target="_blank">10376527</a>, PubMed:<a href="http://www.uniprot.org/citations/15805466" target="_blank">15805466</a>, PubMed:<a href="http://www.uniprot.org/citations/17525747" target="_blank">17525747</a>, PubMed:<a href="http://www.uniprot.org/citations/17525747" target="_blank">19675674</a>, PubMed:<a href="http://www.uniprot.org/citations/17525747" target="_blank">19675674</a>, PubMed:<a href="http://www.uniprot.org/citations/19675674" target="_blank">20595622</a>, PubMed:<a href="http://www.uniprot.org/citations/20595622" target="_blank">20595622</a>, PubMed:<a href="http://www.uniprot.org/citations/20595622" target="_blank">21364637</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/21364637" target="_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/22441692" target="_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/22441692" target="_blank">22441692</a>, PubMed:<a href="http://www.uniprot.org/citations/34048572" target="_blank">34048572</a>). Extracellular
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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 (PubMed:10376527, PubMed: 15805466, PubMed:17525747, PubMed:19675674, PubMed:20595622, PubMed: 21364637, PubMed: 22441692, PubMed:34048572). In turn, MAPK9/INK2 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity (PubMed:10376527). In response to oxidative or ribotoxic stresses, inhibits rRNA synthesis by phosphorylating and inactivating the RNA polymerase 1-specific transcription initiation factor RRN3 (PubMed:15805466). Promotes stressed cell apoptosis by phosphorylating key regulatory factors including TP53 and YAP1 (PubMed:17525747, PubMed:21364637). In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells (PubMed:19290929). Upon T-cell receptor (TCR) stimulation, is activated by CARMA1, BCL10, MAP2K7 and MAP3K7/TAK1 to regulate JUN protein levels (PubMed:19290929). Plays an important role in the osmotic stress- induced epithelial tight-junctions disruption (PubMed: 20595622). When activated, promotes beta-catenin/CTNNB1 degradation and inhibits the canonical Wnt signaling pathway (PubMed:19675674). Also participates in neurite growth in spiral ganglion neurons (By similarity). 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). Phosphorylates ALKBH5 in response to reactive oxygen species (ROS), promoting ALKBH5 sumoylation and inactivation (PubMed:34048572).

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

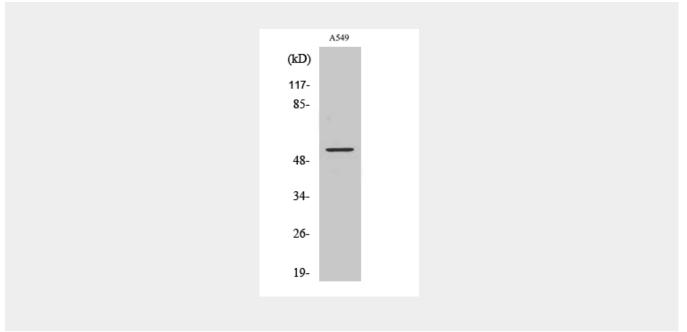
JNK2 Polyclonal Antibody - Protocols

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

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

JNK2 Polyclonal Antibody - Images





JNK2 Polyclonal Antibody - Background

Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation 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/INK) 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 reguired 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). Phosphorylates POU5F1, which results in the inhibition of POU5F1's transcriptional activity and enhances its proteosomal degradation (By similarity).