

JNK2 Rabbit Polyclonal Antibody

Catalog # AP63807

Product Information

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|-------------------|------------------------|
| Application | WB, IHC-P |
| Primary Accession | P45984 |
| Reactivity | Human, Mouse, Rat |
| Host | Rabbit |
| Clonality | Polyclonal |
| Calculated MW | 48139 |

Additional Information

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|--------------------|---|
| Gene ID | 5601 |
| Other Names | Mitogen-activated protein kinase 9 (MAP kinase 9) (MAPK 9) (EC 2.7.11.24) (JNK-55) (Stress-activated protein kinase 1a) (SAPK1a) (Stress-activated protein kinase JNK2) (c-Jun N-terminal kinase 2) |
| Dilution | WB~~WB 1:500-2000,IHC-p 1:50-300 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 |

Protein Information

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|----------|---|
| 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 (PubMed: 10376527 , PubMed: 15805466 , PubMed: 17525747 , PubMed: 19675674 , PubMed: 20595622 , PubMed: 21364637 , PubMed: 22441692 , PubMed: 34048572). 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 (PubMed: 10376527 , PubMed: 15805466 , PubMed: 17525747 , PubMed: 19675674 , PubMed: 20595622 , PubMed: 21364637 , PubMed: 22441692 , PubMed: 34048572). 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 (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](#)).

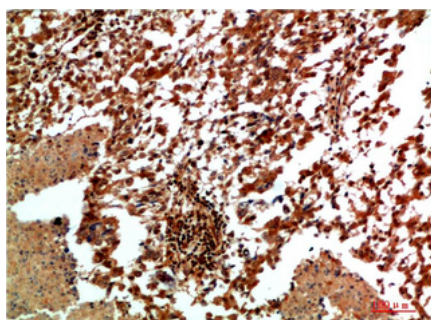
Cellular Location

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

Background

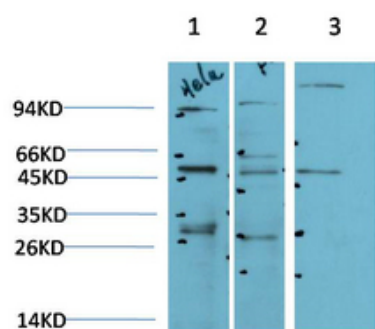
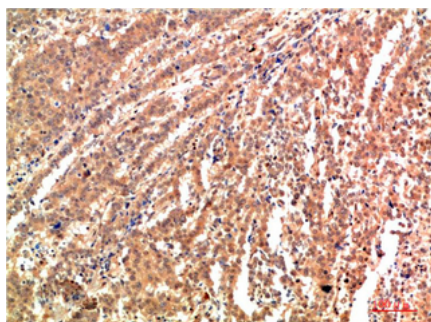
Serine/threonine-protein kinase involved in various processes such as cell proliferation, differentiation, migration, transformation and programmed cell death. Extracellular stimuli such as proinflammatory cytokines or physical stress stimulate the stress-activated protein kinase/c-Jun N-terminal kinase (SAP/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-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 proteasomal degradation (By similarity).

Images



Immunohistochemical analysis of paraffin-embedded Human Lung Carcinoma Tissue using JNK2 Rabbit pAb diluted at 1:200

Immunohistochemical analysis of paraffin-embedded Human Lung Carcinoma Tissue using JNK2 Rabbit pAb diluted at 1:200



Western blot analysis of 1) Hela Cell Lysate, 2)PC12 Cell Lysate, 3) C2C12 Cell Lysate using JNK2 Rabbit pAb diluted at 1:1000.

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