

**Phospho-JNK/SAPK(Thr183/Tyr185)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP3907a**

**Specification**

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**Phospho-JNK/SAPK(Thr183/Tyr185) - Product Information**

Application	WB,E
Primary Accession	<a href="#">P45984</a>
Other Accession	<a href="#">P79996</a> , <a href="#">Q9WTU6</a> , <a href="#">P49186</a>
Reactivity	Rat
Predicted	Chicken, Mouse
Host	Rabbit
Clonality	polyclonal
Isotype	Rabbit IgG
Calculated MW	48139

**Phospho-JNK/SAPK(Thr183/Tyr185) - 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**

This antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide between 157-189 amino acids from human.

**Dilution**

WB~~1:500

**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**

Phospho-JNK/SAPK(Thr183/Tyr185) is for research use only and not for use in diagnostic or therapeutic procedures.

**Phospho-JNK/SAPK(Thr183/Tyr185) - 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 (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](#)). Participates also 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

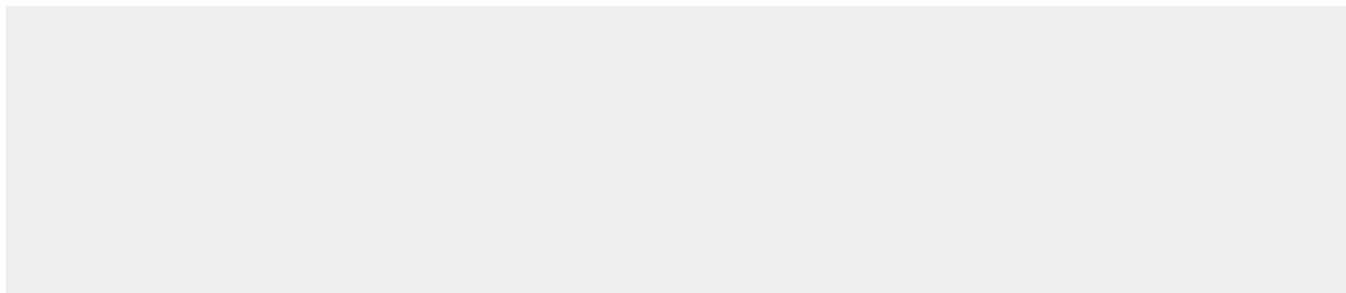
Cytoplasm. Nucleus. Note=Colocalizes with POU5F1 in the nucleus.  
{ECO:0000250|UniProtKB:Q9WTU6}

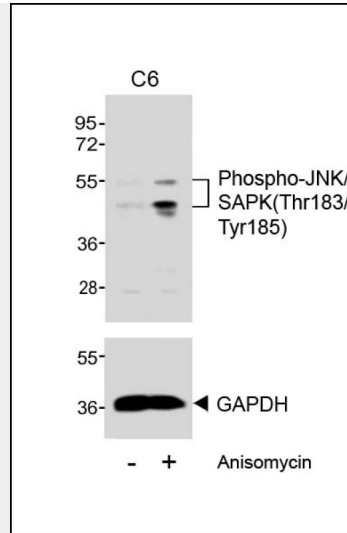
## Phospho-JNK/SAPK(Thr183/Tyr185) - Protocols

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

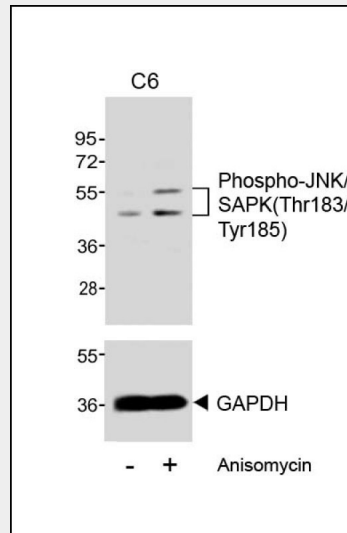
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Phospho-JNK/SAPK(Thr183/Tyr185) - Images





Western blot analysis of extracts from C6 cells, untreated or treated with anisomycin (25 µg/ml), using Phospho-JNK/SAPK(Thr183/Tyr185) (upper) or GAPDH (lower).



Western blot analysis of extracts from C6 cells, untreated or treated with anisomycin (25 µg/ml), using Phospho-JNK/SAPK(Thr183/Tyr185) (upper) or GAPDH (lower).

### Phospho-JNK/SAPK(Thr183/Tyr185) - 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).

#### **Phospho-JNK/SAPK(Thr183/Tyr185) - 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.

#### **Phospho-JNK/SAPK(Thr183/Tyr185) - Citations**

- [Protective Effects and Mechanism of Meretrix meretrix Oligopeptides against Nonalcoholic Fatty Liver Disease.](#)