10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

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

Specification

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

Application	**WB,E**
Primary Accession	P45984
Other Accession	P79996, Q9WTU6, P49186
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. 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}

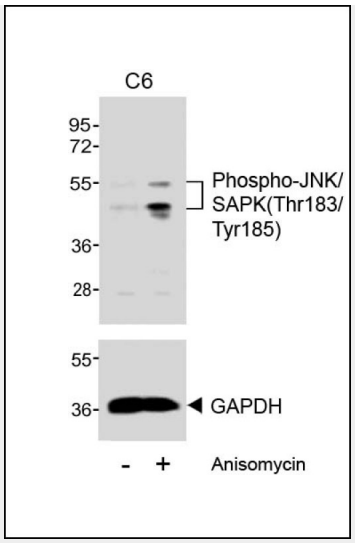
Phospho-JNK/SAPK(Thr183/Tyr185) - Protocols

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

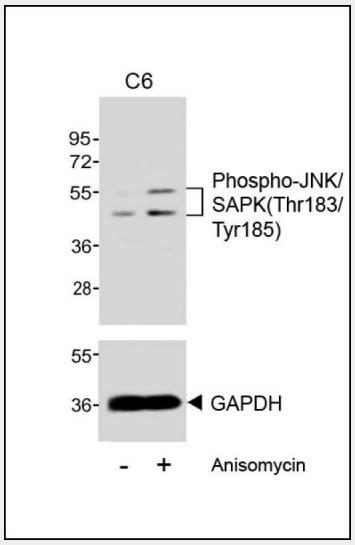
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

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

10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999



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.