ARG51218
anti-SAPK / JNK antibody

Package: 100 µl, 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes SAPK / JNK
Tested Reactivity	Hu, Ms, Rat
Tested Application	IHC-P, WB
Specificity	The antibody reacts with JNK1/2/3
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	SAPK / JNK
Species	Human
Immunogen	Peptide sequence around aa.181~185 (M-M-T-P-Y) derived from Human SAPK / JNK.
Conjugation	Un-conjugated
Alternate Names	MAPK8; Mitogen-Activated Protein Kinase 8; SAPK1; JNK1; PRKM8; JNK; Stress-Activated Protein Kinase 1c; C-Jun N-Terminal Kinase 1; JUN N-Terminal Kinase; MAP Kinase 8; MAPK9; Mitogen-Activated Protein Kinase 9; JNK2; PRKM9; SAPK; Stress-Activated Protein Kinase JNK2; Stress-Activated Protein Kinase 1a; C-Jun N-Terminal Kinase 2; MAP Kinase 9; MAPK10; Mitogen-Activated Protein Kinase 10; JNK3; P493F12; PRKM10; Stress-Activated Protein Kinase JNK3; Stress-Activated Protein Kinase 1b; C-Jun N-Terminal Kinase 3; MAP Kinase P49 3F12; MAP Kinase 10

Application Instructions

Application table

Application	Dilution
IHC-P	1:50 - 1:100
WB	1:500 - 1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

Form	Liquid
Purification	Antibodies were produced by immunizing rabbits with KLH-conjugated synthetic peptide. Antibodies were purified by affinity-chromatography using epitope-specific peptide.
Buffer	PBS (without Mg2+ and Ca2+, pH 7.4), 150mM NaCl, 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	1 mg/ml

Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

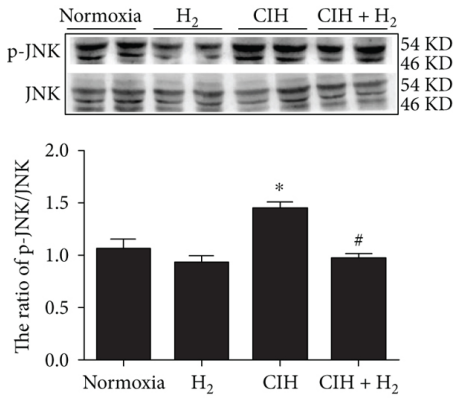
Gene Symbol	MAPK8; MAPK9; MAPK10
Gene Full Name	mitogen-activated protein kinase 8; mitogen-activated protein kinase 9; mitogen-activated protein kinase 10
Background	Responds to activation by environmental stress and pro-inflammatory cytokines by phosphorylating a number of transcription factors, primarily components of AP-1 such as c-Jun and ATF2 and thus regulates AP-1 transcriptional activity. In T-cells, JNK1 and JNK2 are required for polarized differentiation of T-helper cells into Th1 cells.
Function	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). MAPK9 isoforms display different binding patterns: alpha-1 and alpha-2 preferentially bind to JUN, whereas beta-1 and beta-2 bind to ATF2. However, there is no correlation between binding and phosphorylation, which is achieved at about the same efficiency by all isoforms. JUNB is not a substrate for JNK2 alpha-2, and JUND binds only weakly to it. [UniProt]
Highlight	Related Antibody Duos and Panels: ARG30294 Phospho SAPK / JNK Antibody Duo (Total, pT183/Y185) Related products: SAPK antibodies; SAPK Duos / Panels; Anti-Rabbit IgG secondary antibodies;
Research Area	Cancer antibody; Immune System antibody; Signaling Transduction antibody
Calculated Mw	48 kDa
PTM	Dually phosphorylated on Thr-183 and Tyr-185 by MAP2K7 and MAP2K4, which activates the enzyme. Autophosphorylated in vitro.

Images

ARG51218 anti-SAPK / JNK antibody WB image

Western blot: ADSC stained with ARG51218 anti-SAPK / JNK antibody.

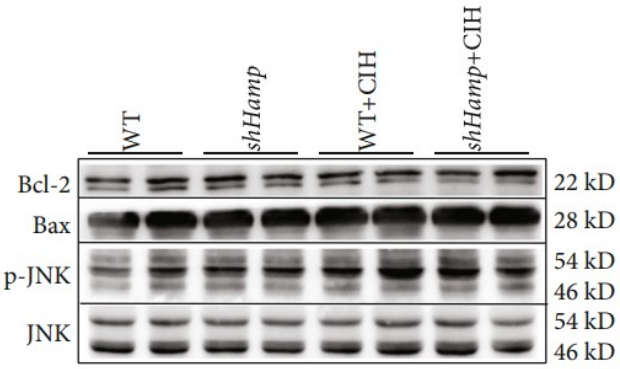
From Wu SC et al. Biomedicines- (2021), doi: 10.3390/biomedicines9050559, Fig. 3. B.



ARG51218 anti-SAPK / JNK antibody WB image

Western blot: Rat Myocardial stained with ARG51218 anti-SAPK / JNK antibody.

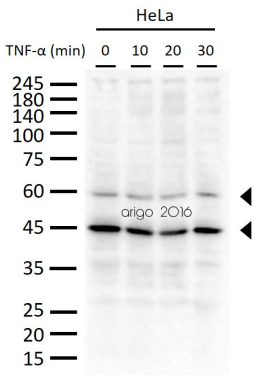
From Ya-Shuo Zhao et al. Oxidative Medicine and Cellular Longevity. (2019), doi: 10.1155/2019/7415212, Fig. 4. d.



ARG51218 nti-SAPK / JNK antibody WB image

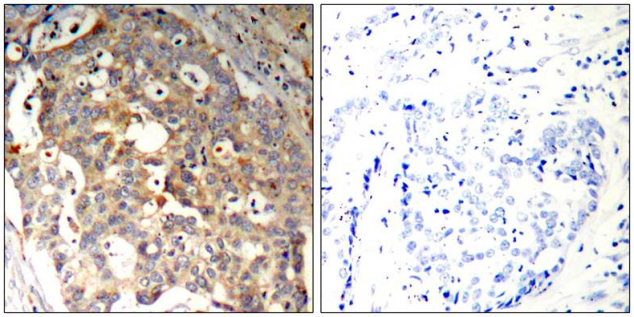
Western blot: Mouse Hippocampus stained with ARG51218 nti-SAPK / JNK antibody.

From Ya-Shuo Zhao et al. Oxid Med Cell Longev. (2021), doi: 10.1155/2021/8520967, Fig. 6. c.



ARG51218 anti-SAPK / JNK antibody WB image

Western blot: 30 µg of HeLa cells untreated or treated with TNF-alpha at 20 ng/ml dilution (10, 20, and 30 min). The blots were stained with ARG51218 anti-SAPK / JNK antibody at 1:500 dilution.



ARG51218 anti-SAPK / JNK antibody IHC-P image

Immunohistochemistry: paraffin-embedded Human breast carcinoma tissue stained with ARG51218 anti-SAPK / JNK antibody (left) or the same antibody preincubated with blocking peptide (right).