ARG55252
anti-JNK1 antibody

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes JNK1
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, WB
Specificity	This antibody detects endogenous levels of JNK1 and does not cross-react with related proteins.
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2a
Target Name	JNK1
Species	Human
Immunogen	Purified recombinant Human JNK1 protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	MAP kinase 8; PRKM8; JNK1; c-Jun N-terminal kinase 1; Stress-activated protein kinase JNK1; MAPK 8; SAPK1c; JNK21B1/2; JNK-46; Mitogen-activated protein kinase 8; EC 2.7.11.24; JNK1A2; JNK; Stress-activated protein kinase 1c; SAPK1

Application Instructions

Application table

Application	Dilution
ICC/IF	1:100
WB	1:1000

Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.
Observed Size	~ 42 kDa

Properties

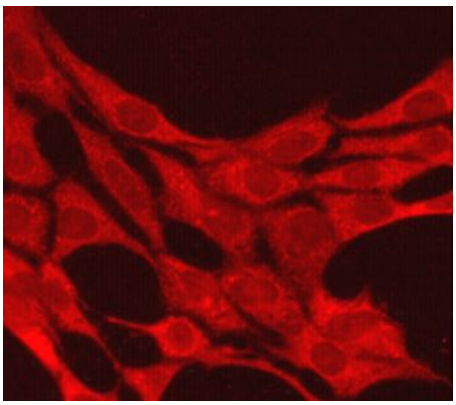
Purification	Affinity purification with immunogen.
Buffer	PBS (pH 7.4), 0.03% Proclin 300 and 50% Glycerol
Preservative	0.03% Proclin 300
Stabilizer	50% Glycerol
Concentration	3.2 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, 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

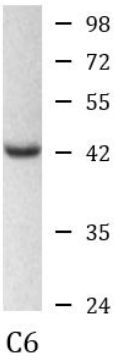
Gene Symbol	MAPK8
Gene Full Name	mitogen-activated protein kinase 8
Background	The protein encoded by this gene is a member of the MAP kinase family. MAP kinases act as an integration point for multiple biochemical signals, and are involved in a wide variety of cellular processes such as proliferation, differentiation, transcription regulation and development. This kinase is activated by various cell stimuli, and targets specific transcription factors, and thus mediates immediate-early gene expression in response to cell stimuli. The activation of this kinase by tumor-necrosis factor alpha (TNF-alpha) is found to be required for TNF-alpha induced apoptosis. This kinase is also involved in UV radiation induced apoptosis, which is thought to be related to cytochrom c-mediated cell death pathway. Studies of the mouse counterpart of this gene suggested that this kinase play a key role in T cell proliferation, apoptosis and differentiation. Five alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Jun 2013]
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 MAPK8/JNK1. In turn, MAPK8/JNK1 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN, JDP2 and ATF2 and thus regulates AP-1 transcriptional activity. Phosphorylates the replication licensing factor CDT1, inhibiting the interaction between CDT1 and the histone H4 acetylase HBO1 to replication origins. Loss of this interaction abrogates the acetylation required for replication initiation. Promotes stressed cell apoptosis by phosphorylating key regulatory factors including p53/TP53 and Yes-associates protein YAP1. In T-cells, MAPK8 and MAPK9 are required for polarized differentiation of T-helper cells into Th1 cells. Contributes to the survival of erythroid cells by phosphorylating the antagonist of cell death BAD upon EPO stimulation. Mediates starvation-induced BCL2 phosphorylation, BCL2 dissociation from BECN1, and thus activation of autophagy. Phosphorylates STMN2 and hence regulates microtubule dynamics, controlling neurite elongation in cortical neurons. In the developing brain, through its cytoplasmic activity on STMN2, negatively regulates the rate of exit from multipolar stage and of radial migration from the ventricular zone. Phosphorylates several other substrates including heat shock factor protein 4 (HSF4), the deacetylase SIRT1, ELK1, or the E3 ligase ITCH. Phosphorylates the CLOCK-ARNTL/BMAL1 heterodimer and plays a role in the regulation of the circadian clock. JNK1 isoforms display different binding patterns: beta-1 preferentially binds to c-Jun, whereas alpha-1, alpha-2, and beta-2 have a similar low level of binding to both c-Jun or ATF2. However, there is no correlation between binding and phosphorylation, which is achieved at about the same efficiency by all isoforms. [UniProt]
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. Phosphorylated by TAOK2.
Cellular Localization	Cytoplasm. Nucleus.

Images



ARG55252 anti-JNK1 antibody ICC/IF image

Immunofluorescence: 3T3 cells fixed by anhydrous methanol for 2 h at -20°C and stained with ARG55252 anti-JNK1 antibody at 1:100 dilution.



ARG55252 anti-JNK1 antibody WB image

Western blot: C6 cell lysate stained with ARG55252 anti-JNK1 antibody at 1:1000 dilution.