abcam

ab314190

Anti-JNK3 antibody [29E10]

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.88% Sodium chloride
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	29E10
Purification technique	Affinity purification
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/500 - 1/2000
Notes	-

Species	Mouse

Dilution info	1/500 - 1/2000
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50 - 1/200
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50 - 1/200

Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MAPK10

Function	Serine/threonine-protein kinase involved in various processes such as neuronal proliferation, differentiation, migration 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 MAPK10/JNK3. In turn, MAPK10/JNK3 phosphorylates a number of transcription factors, primarily components of AP-1 such as JUN and ATF2 and thus regulates AP-1 transcriptional activity. Plays regulatory roles in the signaling pathways during neuronal apoptosis. Phosphorylates the neuronal microtubule regulator STMN2. Acts in the regulation of the amyloid-beta precursor protein/APP signaling during neuronal differentiation by phosphorylating APP. Also participates in neurite growth in spiral ganglion neurons. Phosphorylates the CLOCK-BMAL1 heterodimer and plays a role in the photic regulation of the circadian clock (PubMed:22441692). Phosphorylates JUND and this phosphorylation is inhibited in the presence of MEN1 (PubMed:22327296).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	JNK3 also known as c-Jun N-terminal kinase 3 belongs to the mitogen-activated protein kinase (MAPK) family. It has a molecular weight of approximately 48 kDa. This protein is part of the signaling cascade that responds to stress stimuli such as cytokines and ultraviolet irradiation. JNK3 expression occurs mainly in the brain but some reports note its expression in the heart and pancreas as well.
Biological function summary	JNK3 performs critical functions in neuronal apoptosis and neurodegeneration. JNK3 is part of the MAPK signaling complex which regulates various cellular activities including gene expression and cell differentiation. Activation of JNK3 leads to the phosphorylation and activation of transcription factors like c-Jun which assist in controlling stress-induced cellular responses.
Pathways	Queries into MAPK pathways reveal significant involvement of JNK3 in the stress-activated protein kinase (SAPK) pathway. JNK3 interacts with proteins such as ASK1 and MKK4/7 serving as upstream kinases to modulate environmental stress responses. The pathway also relates to other MAPKs like ERK and p38 although they perform distinct functions within the signaling network.
Associated diseases and disorders	JNK3 has strong connections to neurodegenerative disorders such as Alzheimer's disease and Parkinson's disease. Dysregulation in JNK3 signaling leads to increased neuronal cell death aggravating disease pathology. In Alzheimer's disease JNK3 may interact with tau protein contributing to tau phosphorylation and neurofibrillary tangle formation. In Parkinson's disease JNK3 involvement in dopaminergic neuron apoptosis highlights its potential role in disease progression linking it further to key proteins implicated in neurodegeneration.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

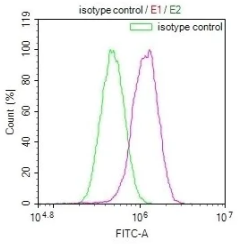
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

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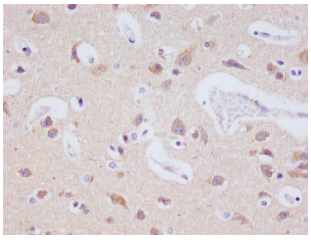
3 product images



Flow Cytometry (Intracellular) - Anti-JNK3 antibody [29E10] (ab314190)

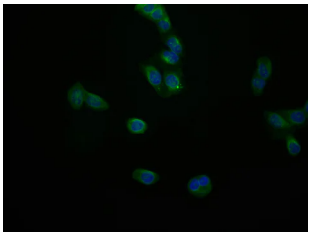
JNK3 Flow Cytometry (Intracellular) staining of PC-3 cells using rabbit Anti-JNK3 antibody

Overlay Peak curve showing PC-3 (Human prostate adenocarcinoma cell line) cells stained with ab314190 (pink line) at 1:100. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1x10E6 cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG (H+L) at 1:200 dilution for 35min at 4°C. Control antibody (green line) was rabbit IgG (1ug/1x10E6 cells) used under the same conditions. Acquisition of >10,000 events was performed.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-JNK3 antibody [29E10] (ab314190)

Immunohistochemical analysis of ab314190 diluted at 1:100 and staining in paraffin-embedded human brain tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.05% DAB.



Immunocytochemistry/ Immunofluorescence - Anti-JNK3 antibody [29E10] (ab314190)

Immunofluorescence staining of PC-3 (Human prostate adenocarcinoma cell line) cells with ab314190 at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4°C. The secondary antibody was Alexa Fluor® 553-conjugated Goat Anti-Rabbit IgG(H+L).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.