abcam

ab31419

Anti-c-Jun antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 1% BSA, 0.88% Sodium chloride
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human JUN aa 200-300. The exact immunogen used to generate this antibody is proprietary information. Database link P05412
Purification technique	Affinity purification Immunogen
Specificity	Antibody detects endogenous levels of c-Jun protein around Serine 243.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Reactivity data

IP

Expected

Species	Mouse, Rat, African green monkey, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Chicken, Cow, Pig
Dilution info	-
Notes	-

Not recommended

Species	Vervet monkey
Dilution info	-
Notes	-

ChIP

Expected

Species	Mouse, Rat, African green monkey, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Chicken, Cow, Pig
Dilution info	-
Notes	-

Not recommended

Species	Vervet monkey
Dilution info	-
Notes	-

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Rat
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Vervet monkey
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab171870 - Rabbit polyclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Chicken, Cow, Pig, African green monkey
Dilution info	-
Notes	-

ELISA

Expected

Species	Mouse, Rat, Vervet monkey, Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Chicken, Cow, Pig, African green monkey

Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/500 - 1/1000
Notes	-

Predicted

Species	Chicken, Cow, Pig, Mouse, African green monkey, Rat
Dilution info	-
Notes	-

Not recommended

Species	Vervet monkey
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/100
Notes	-

Predicted

Species	Chicken, Cow, Pig, Mouse, African green monkey, Rat
Dilution info	-
Notes	-

Not recommended

Species	Vervet monkey
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Predicted

Species	Chicken, Cow, Pig, Mouse, African green monkey, Rat
Dilution info	-
Notes	-

Not recommended

Species	Vervet monkey
Dilution info	-
Notes	-

Target data

See full target information JUN

Function Transcription factor that recognizes and binds to the AP-1 consensus motif 5'-TGA[GC]TCA-3' (PubMed:10995748, PubMed:22083952). Heterodimerizes with proteins of the FOS family to form an AP-1 transcription complex, thereby enhancing its DNA binding activity to the AP-1 consensus sequence 5'-TGA[GC]TCA-3' and enhancing its transcriptional activity (By similarity). Together with FOSB, plays a role in activation-induced cell death of T cells by binding to the AP-1 promoter site of FASLG/CD95L, and inducing its transcription in response to activation of the TCR/CD3 signaling pathway (PubMed:12618758). Promotes activity of NR5A1 when phosphorylated by HIPK3 leading to increased steroidogenic gene expression upon cAMP signaling pathway stimulation

(PubMed:17210646). Involved in activated KRAS-mediated transcriptional activation of USP28 in colorectal cancer (CRC) cells (PubMed:24623306). Binds to the USP28 promoter in colorectal cancer (CRC) cells (PubMed:24623306). (Microbial infection) Upon Epstein-Barr virus (EBV) infection, binds to viral BZLF1 Z promoter and activates viral BZLF1 expression.

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

Supplementary info

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

Activity summary	The protein c-Jun is an important component of the AP-1 transcription factor complex and is often referred to by alternative names such as c-jun. It has a molecular weight of about 39 kDa. Scientists have found c-jun expressed in a wide range of tissues indicating its diverse roles in cellular functions. This protein plays a critical mechanical role by binding specific DNA sequences to regulate the transcription of various genes involved in cell proliferation and apoptosis.
Biological function summary	C-Jun impacts cellular activities by being a significant part of the AP-1 transcription factor complex interacting with other proteins such as Fos. This interaction allows c-Jun to modulate gene expression in response to cellular stimuli. In particular c-Jun influences cell cycle progression and differentiation. Therefore its activity is necessary for physiological and pathological processes. As c-jun's function remains tightly regulated any changes can have wide-ranging effects.
Pathways	C-Jun significantly influences the MAPK/ERK and JNK pathways. These pathways play important roles in cellular responses to stress growth factors and cytokines. Within these pathways c-Jun interacts with proteins such as JNK which phosphorylates c-Jun and enhances its activity. These interactions allow c-Jun to regulate target genes involved in important cellular processes without much delay. Understanding c-Jun's function in these pathways helps elucidate how cells control division survival and apoptosis.

Associated diseases and disorders	C-Jun's dysregulation connects to various conditions including cancer and neurodegenerative diseases. Abnormal c-Jun activity can lead to oncogenesis by promoting unrestrained cellular proliferation. Additionally c-Jun involvement in disorders like Alzheimer's disease stems from its role in apoptotic pathways which may cause neuronal death. Accompanying proteins like JNK are also implicated in these conditions making the regulation and expression of c-Jun a focus for therapeutic research.

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

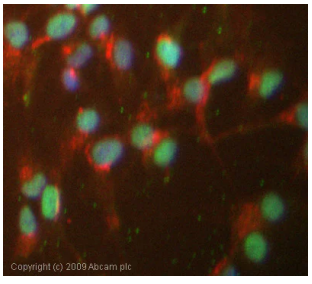
We do not recommend this combination. It is not covered by our product promise.

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.

4 product images

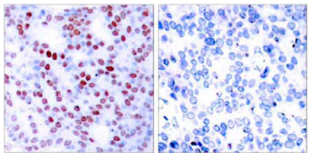


Immunocytochemistry/ Immunofluorescence - Anti-c-Jun antibody (ab31419)

C-Jun Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-c-Jun antibody

ICC/IF image of HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling c-Jun (green) with ab31419 at 1 µg/ml. The cells were fixed in 4% PFA (10 minutes) and then incubated in 1% BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1 hour to permeabilize the cells and block non-specific protein-protein interactions. The cells were then incubated with ab31419 at 1 µg/ml overnight at +4 °C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) ab150077 used at a 1/1000 dilution for 1 hour. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1 hour. DAPI was used to stain the cell

nuclei (blue) at a concentration of 1.43 µM.

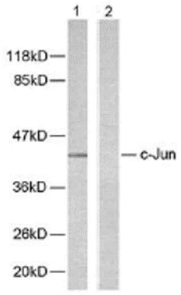


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Jun antibody (ab31419)

C-Jun Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-c-Jun antibody

Paraffin-embedded human breast carcinoma tissue stained for c-Jun with ab31419 at a 1/50 dilution in immunohistochemical analysis.
Left panel: Untreated.

Right panel: Pre-incubated with synthesized peptide.



Western blot - Anti-c-Jun antibody (ab31419)

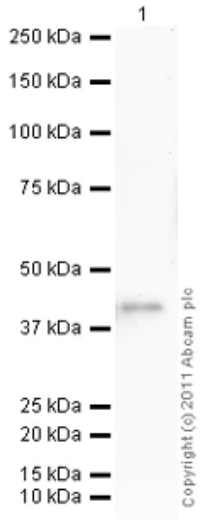
All lanes:
Western blot - Anti-c-Jun antibody (ab31419) at 1/500 dilution

Lane 1:
Extracts of Hela (Human epithelial cell line from cervix adenocarcinoma) cells

Lane 2:
Extracts of Hela (Human epithelial cell line from cervix adenocarcinoma) cells with immunizing peptide

Predicted band size: 35 kDa

Observed band size: 43 kDa



Western blot - Anti-c-Jun antibody (ab31419)

All lanes:
Western blot - Anti-c-Jun antibody (ab31419) at 1/500 dilution

All lanes:
Recombinant Human c-Jun protein (ab54318) at 0.01 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) preadsorbed (ab97080) at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 35 kDa

Exposure time: 30s

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