abcam

## ab40766

# Anti-c-Jun antibody [EP693Y]

Anti-c-Jun antibody [EP693Y] (ab40766) is a rabbit monoclonal antibody detecting c-Jun in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- KO validated for confirmed specificity
- Biophysical QC for unrivalled batch-batch consistency
- Over 40 publications
- Trusted since 2006

Recombinant | RabMAb | KO Validated | 20ul selling size

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | EP693Y |
| **Purification technique** | Affinity purification Protein A |
| **Specificity** | PBS only lot tested. |
| **Concentration** | 0.203 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/500 |
| **Notes** | Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/500 |
| **Notes** | Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/500 |
| **Notes** | Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol. |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/50 |
| **Notes** | Signal can be observed in cells fixed with either methanol or paraformaldehyde. |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/50 |
| **Notes** | Signal can be observed in cells fixed with either methanol or paraformaldehyde. |

### Expected

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## IP

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/20 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Rat, Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 - 1/5000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/1000 - 1/5000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 - 1/5000 |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/20 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **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** | Conditional Ambient |
| **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 is this antibody validated in?**
Anti-c-Jun antibody [EP693Y] (ab40766) is a rabbit recombinant monoclonal antibody and is validated for use in

Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human, Mouse, Rat samples.

**What is the molecular weight of c-Jun?**
Anti-c-Jun [EP693Y] (ab40766) specifically detects a band for c-Jun (UniProt: P05412) at a molecular weight of 39kDa.

**Trusted by the scientific community**
Anti-c-Jun [EP693Y] (ab40766) was first used in a scientific publication in 2006 and has been cited over 40 times in peer-reviewed journals.

**Specificity confirmed**
The specificity of Anti-c-Jun antibody [EP693Y] (ab40766) has been confirmed by Western blot testing in JUN Knockout HEK-293 cells.

**Other related products**
We have a range of other formats of antibody clone [EP693Y] also available for your convenience: ab40766, Alexa Fluor® 647 - ab210012, Alexa Fluor® 488 - ab210013, Carrier free - ab247284, PE - ab303101, APC - ab303102, HRP - ab303103, Alkaline Phosphatase - ab308727, Alexa Fluor® 594 - ab310444, Alexa Fluor® 555 - ab311972, Alexa Fluor® 568 - ab312445, Alexa Fluor® 750 - ab321617

**Species reactivity**
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

**Patented technology**
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

**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.

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

## 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**

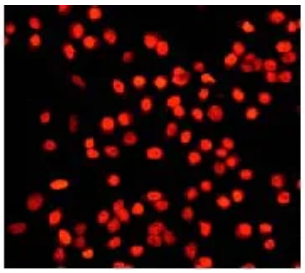
We do not recommend this combination. It is not covered by our product promise.

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.

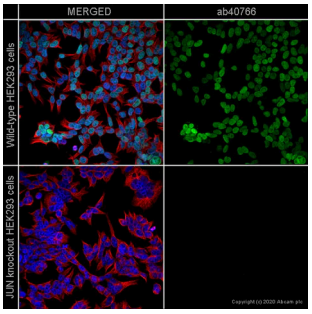
## 10 product images



### Immunocytochemistry/ Immunofluorescence - Anti-c-Jun antibody [EP693Y] (ab40766)

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

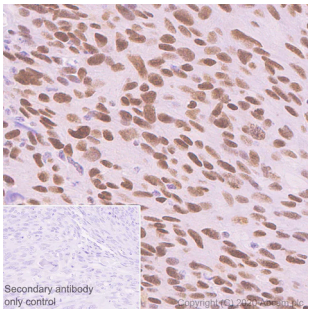
Immunofluorescent staining of HeLa cells
ab40766 at 1/100 dilution




### Immunocytochemistry/ Immunofluorescence - Anti-c-Jun antibody [EP693Y] (ab40766)

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

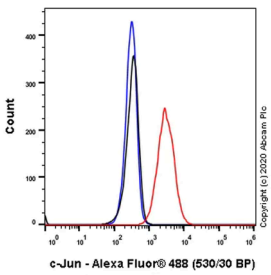
ab40766 staining c-Jun in wild-type HEK293 cells (top panel) and c-Jun knockout HEK293 cells (bottom panel). The cells were fixed with 100% methanol (5 min) permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab40766 at 1/250 dilution and ab7291 (Mouse monoclonal to alpha Tubulin) at 1/1000 dilution overnight at +4°C followed by a further incubation at room temperature for 1h with a goat secondary antibody to rabbit IgG (Alexa Fluor® 488) (ab150081) at 2 µg/ml (shown in green) and a goat secondary antibody to mouse IgG (Alexa Fluor® 594) (ab150120) at 2 µg/ml (shown in pseudo color red). Nuclear DNA was labelled in blue with DAPI.
Image was taken with a high-content analysis system (Perkin Elmer Operetta CLS™).




### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Jun antibody [EP693Y] (ab40766)

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

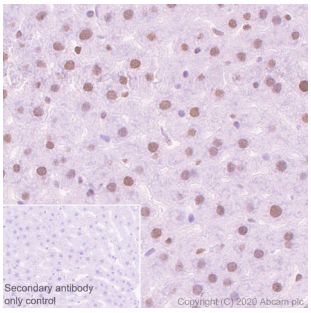
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human cervix carcinoma tissue sections labeling c-Jun with Purified ab40766 at 1:500 dilution (0.41 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.




## Flow Cytometry (Intracellular) - Anti-c-Jun antibody [EP693Y] (ab40766)

C-Jun Flow Cytometry (Intracellular) staining using rabbit Anti-c-Jun antibody

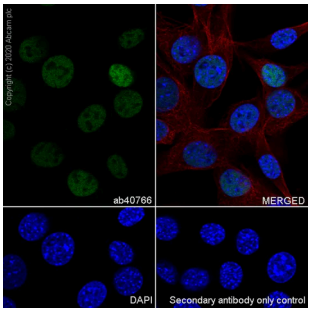
Intracellular Flow Cytometry analysis of HEK-293 (Human embryonic kidney epithelial cell) cells labeling c-Jun with Purified ab40766 at 1/20 dilution (10µg/ml) (Red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488, ab150077) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).




## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Jun antibody [EP693Y] (ab40766)

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

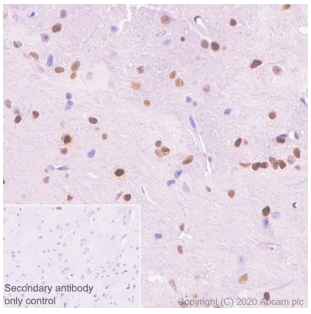
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat liver tissue sections labeling c-Jun with Purified ab40766 at 1:500 dilution (0.41 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.




## Immunocytochemistry/ Immunofluorescence - Anti-c-Jun antibody [EP693Y] (ab40766)

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

Immunocytochemistry analysis of NIH/3T3 (Mouse embryonic fibroblast) cells labeling c-Jun with Purified ab40766 at 1:50 dilution (4.06 µg/ml). Cells were fixed in 4% Paraformaldehyde and permeabilized with 0.1% tritonX-100. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI (blue) was used as nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.

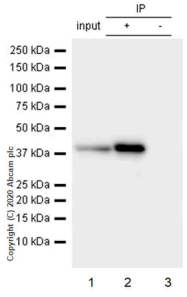



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-c-Jun antibody [EP693Y] (ab40766)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse cerebrum tissue sections labeling c-Jun with Purified ab40766 at 1:500 dilution (0.41 µg/ml). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

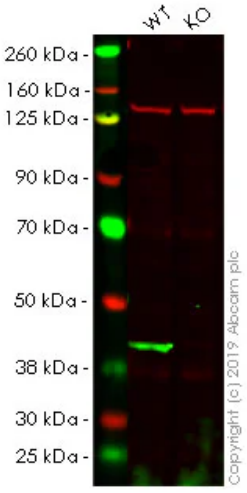
## Immunoprecipitation - Anti-c-Jun antibody [EP693Y] (ab40766)




Purified ab40766 at 1/20 dilution (1µg) immunoprecipitating c-Jun in NIH/3T3 whole cell lysate.
Lane 1 (input): NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate 10µg
Lane 2 (+): ab40766 + NIH/3T3 whole cell lysate.
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab40766 in NIH/3T3 whole cell lysate.
VeriBlot for IP Detection Reagent (HRP) (ab131366) (1/1000 dilution) was used for Western blotting.
Blocking Buffer and concentration: 5% NFDM/TBST.
Diluting buffer and concentration: 5% NFDM/TBST.
Observed band size: 39 kDa
All lanes:
Immunoprecipitation - Anti-c-Jun antibody [EP693Y] (ab40766)

Predicted band size: 35 kDa

## Western blot - Anti-c-Jun antibody [EP693Y] (ab40766)




C-Jun Western blot staining using rabbit Anti-c-Jun antibody

**Lanes 1 - 2:** Merged signal (red and green). Green - ab40766 observed at 35 kDa. Red - loading control, ab18058, observed at 130 kDa.
ab40766 was shown to specifically react with Jun in wild-type HEK-293 cells as signal was lost in Jun knockout cells. Wild-type and Jun knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3% Milk. ab40766 and ab18058 (Mouse anti-Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/10000 dilution for 1 hour at room temperature before imaging.

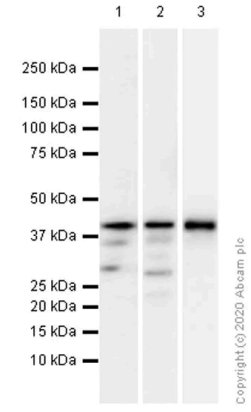
All lanes:
Western blot - Anti-c-Jun antibody [EP693Y] (ab40766) at 1/1000 dilution

Lane 1:
Wild-type HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate at 40 µg

Lane 2:
Jun knockout HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate at 40 µg

Predicted band size: 35 kDa

## Western blot - Anti-c-Jun antibody [EP693Y] (ab40766)




C-Jun Western blot staining using rabbit Anti-c-Jun antibody

Blocking Buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-c-Jun antibody [EP693Y] (ab40766) at 1/1000 dilution

Lane 1:
HEK-293 (Human embryonic kidney epithelial cell) whole cell lysate at 15 µg

Lane 2:
NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate at 15 µg

Lane 3:
PC-12 (Rat adrenal gland pheochromocytoma ) whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 35 kDa

Observed band size: 39 kDa

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