abcam

ab218578

Anti-c-Fos antibody [EPR883(2)] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR883(2)
Purification technique	Affinity purification Protein A

Reactivity data

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Rat, Human
Dilution info	-
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information FOS

Function	Nuclear phosphoprotein which forms a tight but non-covalently linked complex with the JUN/AP-1 transcription factor. In the heterodimer, FOS and JUN/AP-1 basic regions each seems to interact with symmetrical DNA half sites. On TGF-beta activation, forms a multimeric SMAD3/SMAD4/JUN/FOS complex at the AP1/SMAD-binding site to regulate TGF-beta-mediated signaling. Has a critical function in regulating the development of cells destined to form and maintain the skeleton. It is thought to have an important role in signal transduction, cell proliferation and differentiation. In growing cells, activates phospholipid synthesis, possibly by activating CDS1 and PI4K2A. This activity requires Tyr-dephosphorylation and association with the endoplasmic reticulum.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab218578 is the carrier-free version of ab134122.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	The c-Fos protein also known as c-Fos is a component of the Fos family of transcription factors which includes FosB Fra-1 and Fra-2. These proteins play a role in regulating gene expression. c-Fos has a molecular weight of about 55 kDa. You usually find c-Fos expressed in various tissues including the brain providing a marker for neuronal activity and is often induced in response to stimuli like stress growth factors and mitogens. In research settings c-Fos staining and c-Fos immunohistochemistry are techniques commonly used to study activation patterns in cells and tissues.
Biological function summary	C-Fos acts as part of the Activator Protein-1 (AP-1) complex a group of DNA-binding proteins that regulate gene transcription. This complex forms when c-Fos and Jun proteins dimerize. The AP-1 complex controls several cellular processes such as proliferation differentiation and apoptosis. Due to its participation in these vital processes c-Fos influences cellular responses to external stimuli and can affect how cells behave under stress.
Pathways	C-Fos significantly contributes to the MAPK/ERK pathway which plays a role in cell growth and differentiation. It partners with Jun proteins to form functional transcription factors within the MAPK signaling cascade. Additionally c-Fos is involved in the JNK signaling pathway linking it to stress responses and apoptosis. These pathways highlight the partnerships between c-Fos and other proteins like ERK and JNK indicating their intertwined roles in cellular signaling networks.

Associated diseases and disorders

Researchers associate c-Fos with cancer and neurodegenerative diseases. In cancer c-Fos expression correlates with changes in AP-1 activity which can lead to altered cell growth and proliferation potentially contributing to tumor formation. Its involvement in neurodegenerative diseases reveals its role in neuron apoptosis and cellular stress responses. In these scenarios proteins like Bcl-2 also play a part with CDK1 sharing connections in processes that affect cell cycle and apoptosis illustrating c-Fos's broad significance in both normal and pathological conditions.

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

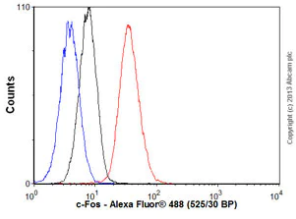
We do not recommend this combination. It is not covered by our product promise.

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.

2 product images

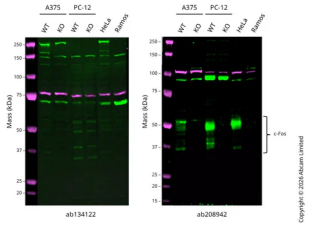


Flow Cytometry (Intracellular) - Anti-c-Fos antibody [EPR883(2)] - BSA and Azide free (ab218578)

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

Overlay histogram showing HeLa cells stained with ab134122 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab134122, 1/10000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal)

(0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134122).



Western blot - Anti-c-Fos antibody [EPR883(2)] - BSA and Azide free (ab218578)

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

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab134122).

Western blot: Side by side comparison of ab134122 with ab208942 shows that ab208942 has better sensitivity. Anti-c-Fos antibody [EPR883(2)] ab134122 and Anti-c-Fos antibody [2H2] ab208942 staining at 1/1000 dilution, shown in green; Mouse anti-CANX ab238078 loading control staining at 1/20000 dilution, shown in magenta. To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 5 % Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW and Goat anti-Mouse 680RD at 1/20,000 dilution.
All lanes:
Western blot - Anti-c-Fos antibody [EPR883(2)] (ab134122) at 1/1000 dilution

Lane 1:
Wild-type A375 cell lysates at 20 µg

Lane 2:
FOS knockout A375 cell lysates at 20 µg

Lane 3:
Wild-type PC-12 ab279978 cell lysates at 20 µg

Lane 4:
FOS knockout PC-12 ab281615 cell lysates at 20 µg

Lane 5:
HeLa cell lysates at 20 µg

Lane 6:
Ramos cell lysates at 20 µg

Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 41 kDa

Observed band size: 35-50 kDa

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