abcam

Product datasheet

Anti-c-Fos antibody [EPR883(2)] ab134122

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-c-Fos antibody [EPR883(2)]
Description	Rabbit monoclonal [EPR883(2)] to c-Fos
Host species	Rabbit
Tested applications	**Suitable for:** Flow Cyt (Intra), WB **Unsuitable for:** ICC/IF,IHC-P or IP
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide within Human c-Fos aa 200-300. The exact sequence is proprietary.
Positive control	Lysates of U937 cells treated with TPA and untreated U937 cells, Lysate of HeLa cells treated with TPA.
General notes	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 production For more information **see here**. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.5% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR883(2)

Isotype IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab134122 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		1/1000 - 1/10000. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
WB		1/1000 - 1/10000. Detects a band of approximately 62 kDa (predicted molecular weight: 41 kDa).

Application notes Is unsuitable for ICC/IF,IHC-P or IP.

Target

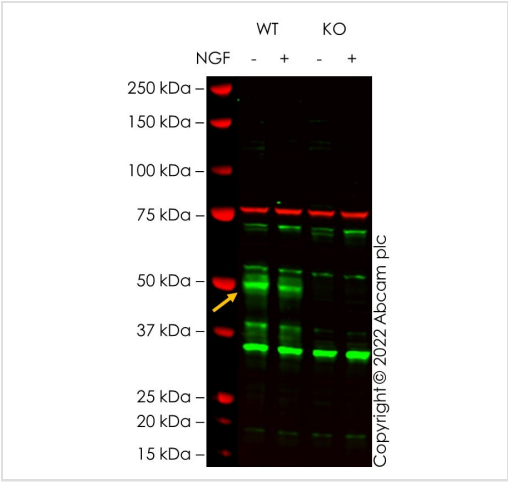
Function Nuclear phosphoprotein which forms a tight but non-covalently linked complex with the JUN/AP-1 transcription factor. In the heterodimer, FOS and JUN/AP-1 basic regions each seems to interact with symmetrical DNA half sites. On TGF-beta activation, forms a multimeric SMAD3/SMAD4/JUN/FOS complex 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.

Sequence similarities Belongs to the bZIP family. Fos subfamily.
Contains 1 bZIP domain.

Post-translational modifications Phosphorylated in the C-terminal upon stimulation by nerve growth factor (NGF) and epidermal growth factor (EGF). Phosphorylated, in vitro, by MAPK and RSK1. Phosphorylation on both Ser-362 and Ser-374 by MAPK1/2 and RSK1/2 leads to protein stabilization with phosphorylation on Ser-374 being the major site for protein stabilization on NGF stimulation. Phosphorylation on Ser-362 and Ser-374 primes further phosphorylations on Thr-325 and Thr-331 through promoting docking of MAPK to the DEF domain. Phosphorylation on Thr-232, induced by HA-RAS, activates the transcriptional activity and antagonizes sumoylation. Phosphorylation on Ser-362 by RSK2 in osteoblasts contributes to osteoblast transformation.
Constitutively sumoylated by SUMO1, SUMO2 and SUMO3. Desumoylated by SENP2. Sumoylation requires heterodimerization with JUN and is enhanced by mitogen stimulation. Sumoylation inhibits the AP-1 transcriptional activity and is, itself, inhibited by Ras-activated phosphorylation on Thr-232.

Cellular localization Nucleus.

Images



Western blot - Anti-c-Fos antibody [EPR883(2)] (ab134122)

All lanes : Anti-c-Fos antibody [EPR883(2)] (ab134122) at 1/1000 dilution

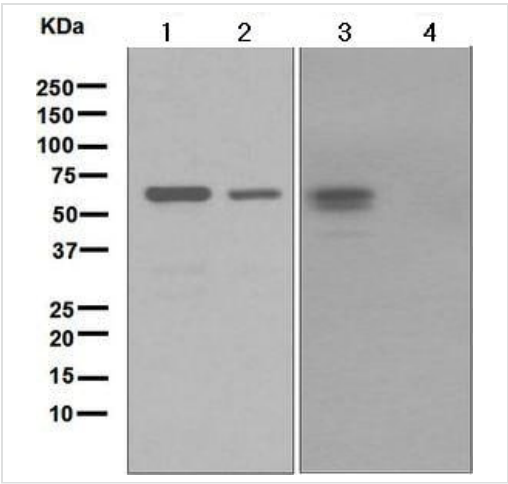
Lane 1 : Wild-type PC-12 Untreated Control NGF (0 ng/mL, 4 days) cell lysate
Lane 2 : Wild-type PC-12 Treated NGF (111 ng/mL, 4 days) cell lysate
Lane 3 : FOS knockout PC-12 Untreated Control NGF (0 ng/mL, 4 days) cell lysate
Lane 4 : FOS knockout PC-12 Treated NGF (111 ng/mL, 4 days) cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 41 kDa
Observed band size: 45-55 kDa

False colour image of Western blot: Anti-c-Fos antibody [EPR883(2)] staining at 1/1000 dilution, shown in green; Mouse anti-CANX [CANX/1543] (**ab238078**) loading control staining at 1/20000 dilution, shown in red. In Western blot, ab134122 was shown to bind specifically to c-Fos. A band was observed at 45-55 kDa in treated wild-type PC-12 cell lysates with no signal observed at this size in FOS knockout cell line **ab281615** (knockout cell lysate **ab283111**). Treatment of NGF has no observable affect on protein expression in this cell line. To generate this image, wild-type and FOS knockout PC-12 cell lysates were analysed. First, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3 % 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 IgG H&L 800CW and Goat anti-Mouse IgG H&L 680RD at 1/20000 dilution.



Western blot - Anti-c-Fos antibody [EPR883(2)] (ab134122)

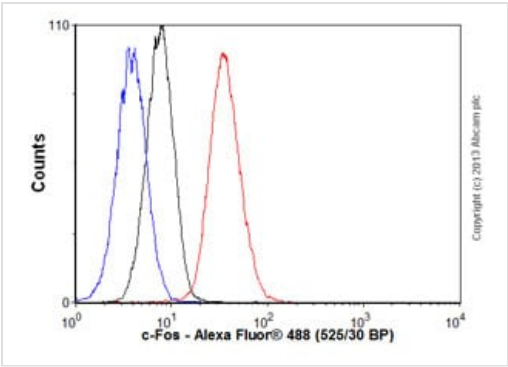
All lanes : Anti-c-Fos antibody [EPR883(2)] (ab134122) at 1/1000 dilution

Lane 1 : Lysate of U937 cells treated with TPA
Lane 2 : U937 cell lysate
Lane 3 : Lysate of HeLa cells treated with TPA
Lane 4 : HeLa cell lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat ant-rabbit HRP conjugated antibody at 1/2000 dilution

Predicted band size: 41 kDa
Observed band size: 62 kDa



Flow Cytometry (Intracellular) - Anti-c-Fos antibody [EPR883(2)] (ab134122)

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.

Anti-c-Fos antibody [EPR883(2)] (ab134122)

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