abcam

ab11959

Anti-Fos B antibody [83B1138]

Anti-Fos B antibody [83B1138] (ab11959) is a mouse monoclonal antibody detecting Fos B in **Western Blot, Flow Cytometry, IHC-Fr**. Suitable for **Human, Mouse**.

- Over 40 publications
- Trusted since 2004

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human FOSB. The exact immunogen used to generate this antibody is proprietary information. Database link P53539
Clone number	83B1138
Purification technique	Affinity purification Protein G
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Affinity purified.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Expected

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

WB

Tested

Species	Human
Dilution info	1-2 µg/mL
Notes	-

Expected

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

IHC-Fr

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

Species	Human

Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information FOSB

Function	Heterodimerizes with proteins of the JUN family to form an AP-1 transcription factor complex, thereby enhancing their DNA binding activity to gene promoters containing an AP-1 consensus sequence 5'-TGA[GC]TCA-3' and enhancing their transcriptional activity (PubMed:12618758, PubMed:28981703). As part of the AP-1 complex, facilitates enhancer selection together with cell-type-specific transcription factors by collaboratively binding to nucleosomal enhancers and recruiting the SWI/SNF (BAF) chromatin remodeling complex to establish accessible chromatin (By similarity). Together with JUN, 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). Exhibits transactivation activity in vitro (By similarity). Involved in the display of nurturing behavior towards newborns (By similarity). May play a role in neurogenesis in the hippocampus and in learning and memory-related tasks by regulating the expression of various genes involved in neurogenesis, depression and epilepsy (By similarity). Implicated in behavioral responses related to morphine reward and spatial memory (By similarity). Isoform 11. Exhibits lower transactivation activity than isoform 1 in vitro (By similarity). The heterodimer with JUN does not display any transcriptional activity, and may thereby act as an transcriptional inhibitor (By similarity). May be involved in the regulation of neurogenesis in the hippocampus (By similarity). May play a role in synaptic modifications in nucleus accumbens medium spiny neurons and thereby play a role in adaptive and pathological reward-dependent learning, including maladaptive responses involved in drug addiction (By similarity). Seems to be more stably expressed with a half-life of ~9.5 hours in cell culture as compared to 1.5 hours half-life of isoform 1 (By similarity).

Storage

Shipped at conditions	Blue Ice
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-Fos B antibody [83B1138] (ab11959) is a mouse monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunohistochemistry (IHC-Fr) in Human, Mouse samples.

What is the molecular weight of Fos B?
Anti-Fos B [83B1138] (ab11959) specifically detects a band for Fos B (UniProt: P53539) at a molecular weight of 40.6kDa.

Trusted by the scientific community
Anti-Fos B [83B1138] (ab11959) was first used in a scientific publication in 2004 and has been cited over 40 times in peer-reviewed journals.

Supplementary info

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

Activity summary	Fos B also known as FosB is a protein encoded by the FOSB gene and belongs to the Fos family of transcription factors. Weighing approximately 46 kDa this protein acts within the cell nucleus and is expressed in several tissues particularly in brain regions. Delta Fos B an isoform of Fos B has gained attention for its stable accumulation in certain neuronal populations. Researchers often study Fos B using techniques like ELISA and immunohistochemistry to investigate its presence and distribution.
Biological function summary	Functions of Fos B include regulation of gene expression through forming AP-1 transcription factor complexes with Jun family proteins. These complexes bind to DNA influencing the expression of genes involved in processes such as cell proliferation differentiation and survival. Fos B is structurally similar to other Fos family proteins such as c-Fos which emphasises its role in response to extracellular signals and stress stimuli. Both Fos B and its isoform Delta Fos B have distinct expression patterns suggesting unique functions.
Pathways	Fos B plays a role in the MAPK/ERK signaling pathway which is essential for transmitting extracellular signals to promote diverse cellular responses. Within this pathway interactions with proteins like Jun lead to modulation of gene expression critical for cellular responses to growth factors. Additionally connections to the CREB signaling pathway link Fos B to processes concerning neuronal plasticity and memory further highlighting its participation in important biological functions.
Associated diseases and disorders	Involvement of Fos B has been noted in neurological conditions such as addiction and depression. Delta Fos B in particular accumulates in response to chronic drug exposure and serves as a molecular switch in addiction-related neuroadaptations. Connections with proteins such as CREB and other transcriptional regulators have broadened the understanding of how Fos B and its isoforms impact neural circuits and contribute to the pathology of mood disorders.

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.

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

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2 product images

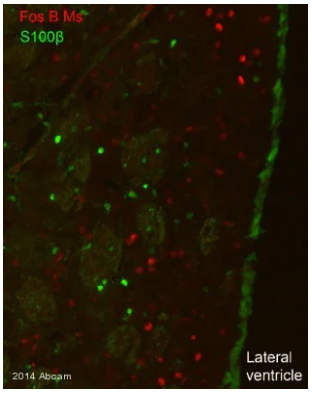
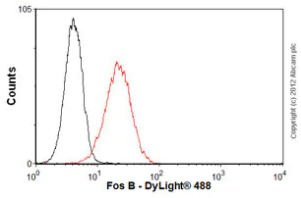


Image courtesy of Dr. Karine Thibault, Université Paris Descartes, France

Immunohistochemistry (Frozen sections) - Anti-Fos B antibody [83B1138] (ab11959)

Fos B Immunohistochemistry (Frozen sections) staining using mouse Anti-Fos B antibody

ab11959 Fos B antibody immunostaining (red) in mouse brain cortex showing the striatum. Tissue was fixed with paraformaldehyde, before incubation with the antibody (1/3000) for 18 hours at 25°C. A donkey anti-mouse Alexa Fluor® 568 conjugated secondary was used at 1/1000.



Flow Cytometry - Anti-Fos B antibody [83B1138] (ab11959)

Fos B Flow Cytometry staining using mouse Anti-Fos B antibody

Overlay histogram showing HeLa cells stained with ab11959 (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 (ab11959, 1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed.

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