

ARG10733 anti-c-Fos antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes c-Fos
Tested Reactivity	Hu, Ms, Rat, Cow, Hrs, Pig
Predict Reactivity	Chk
Tested Application	ICC/IF, IHC-Fr, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	c-Fos
Species	Human
Immunogen	Full length recombinant Human protein expressed in and purified from E. coli.
Conjugation	Un-conjugated
Alternate Names	Proto-oncogene c-Fos; C-FOS; AP-1; Cellular oncogene fos; p55; G0/G1 switch regulatory protein 7

Application Instructions

Application table	Application	Dilution
	ICC/IF	1:5000
	IHC-Fr	1:5000
	WB	1:1000 - 1:2000

Application Note * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

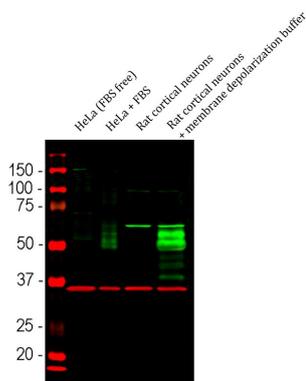
Properties

Form	Liquid
Purification	Affinity purification.
Buffer	PBS and 50% Glycerol.
Stabilizer	50% Glycerol
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	FOS
Gene Full Name	FBJ murine osteosarcoma viral oncogene homolog
Background	The Fos gene family consists of 4 members: FOS, FOSB, FOSL1, and FOSL2. These genes encode leucine zipper proteins that can dimerize with proteins of the JUN family, thereby forming the transcription factor complex AP-1. As such, the FOS proteins have been implicated as regulators of cell proliferation, differentiation, and transformation. In some cases, expression of the FOS gene has also been associated with apoptotic cell death. [provided by RefSeq, Jul 2008]
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. [UniProt]
Highlight	Related products: Anti-Rabbit IgG secondary antibodies; Related news: Viral-like capsids, new trans-synaptic mRNA transport mechanism
Research Area	Cancer antibody; Gene Regulation antibody; Neuroscience antibody; AP-1 early response transcription factor study antibody
Calculated Mw	41 kDa
PTM	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 (By similarity). Constitutively sumoylated with 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. In quiescent cells, the small amount of FOS present is phosphorylated at Tyr-10 and Tyr-30 by SRC. This Tyr-phosphorylated form is cytosolic. In growing cells, dephosphorylated by PTPN2. Dephosphorylation leads to the association with endoplasmic reticulum membranes and activation of phospholipid synthesis.

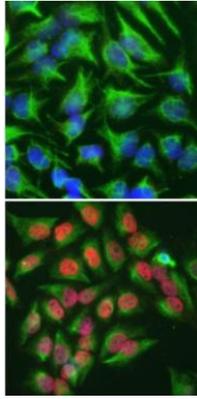
Images



ARG10733 anti-c-Fos antibody WB image

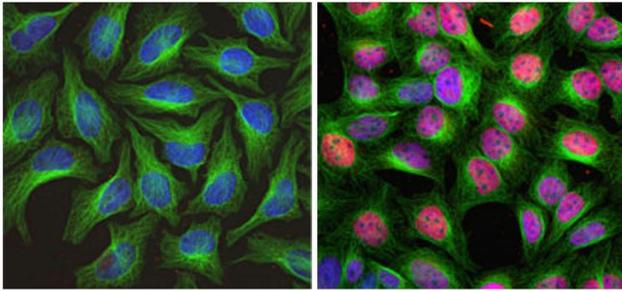
Western blot: 1) HeLa (FBS free), 2) HeLa treated with 20% FBS for 2 hours after being in FBS free media for 36 hours, 3) Rat cortical neurons and 4) Rat cortical neurons treated with membrane depolarization buffer for 5 hours. The blots were stained with ARG10733 anti-c-Fos antibody (green) at 1:5000 dilution and [ARG52320](#) anti-GAPDH antibody [1D4] (red) at 1:5000 dilution.

Multiple bands at 50-65 kDa correspond to different isoforms of the c-FOS protein.



ARG10733 anti-c-Fos antibody ICC/IF image

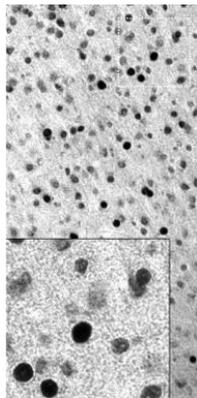
Immunocytochemistry: ARG10733 anti-c-Fos antibody staining (red) in HeLa cells which were treated with serum-starvation for 36 hours, followed by 2 hours, 20% FBS stimulation (bottom panel), or followed by PBS treatment (top panel). Red c-Fos staining only localizes in the nuclei of stimulated cells, but not in un-stimulated cells. Cells were co-stained with a chicken polyclonal antibody against vimentin (green). Blue shows DAPI staining of nuclear DNA.



ARG10733 anti-c-Fos antibody ICC/IF image

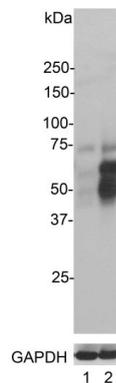
Immunofluorescence: HeLa cells stained with ARG10733 anti-c-Fos antibody (red) at 1:5000 dilution and Mouse mAb to tubulin (green) at 1:10000 dilution. DAPI (blue) for nuclear staining.

HeLa cells were kept in fetal bovine serum (FBS) - free media for 36 hours. Then the cells were treated with PBS (left), as a control, or stimulated with 20% FBS (right) for 30 min. c-FOS antibody labels only the nuclei of stimulated cells.



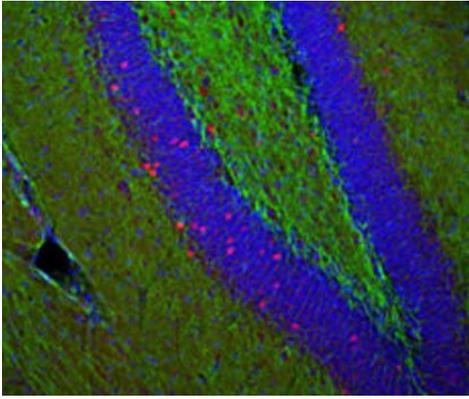
ARG10733 anti-c-Fos antibody IHC image

Immunohistochemistry: Mouse brain section (45 μ M; fixed by transcardial perfusion with 4% paraformaldehyde) stained with ARG10733 anti-c-Fos antibody using a standard HRP-DAB staining technique. Cells expressing c-Fos appear to be dark.



ARG10733 anti-c-Fos antibody WB image

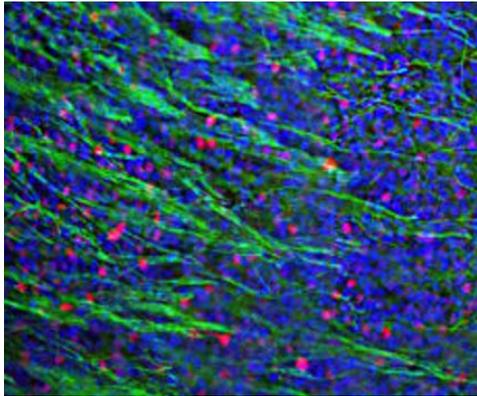
Western blot: Top panel: 1) HeLa cells were serum-starved for 36 hours, and 2) Serum-starved HeLa cells were stimulated with 20% FBS (fetal bovine serum) for 2 hours. ARG10733 anti-c-Fos antibody recognizes bands with apparent molecular weight of 50-65 kDa, representing multiple forms of the c-Fos protein. These bands appear in serum stimulated cells and are absent in serum-starved HeLa cells. Bottom panel: Blot was stripped and stained with a monoclonal antibody (Clone: 1D4) against GAPDH, used as loading control.



ARG10733 anti-c-Fos antibody ICC/IF image

Immunofluorescence: Mouse hippocampus sections stained with ARG10733 anti-c-Fos antibody (red) at 1:20000 dilution and Mouse mAb to NF-L (green) at 1:5000 dilution. DAPI (blue) for nuclear staining. Following transcardial perfusion of Mouse with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 μ M, and free-floating sections were stained with above antibodies.

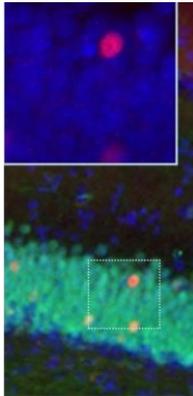
The c-FOS antibody stains only nuclei of spontaneously active neurons. NF-L is expressed in axons of neuronal cells.



ARG10733 anti-c-Fos antibody ICC/IF image

Immunofluorescence: Mouse olfactory bulb sections stained with ARG10733 anti-c-Fos antibody (red) at 1:20000 dilution and Mouse mAb to NF-L (green) at 1:5000 dilution. DAPI (blue) for nuclear staining. Following transcardial perfusion of Mouse with 4% paraformaldehyde, brain was post fixed for 24 hours, cut to 45 μ M, and free-floating sections were stained with above antibodies.

The c-FOS antibody stains only nuclei of spontaneously active neurons. NF-L is expressed in axons of neuronal cells.



ARG10733 anti-c-Fos antibody IHC-Fr image

Immunohistochemistry: Frozen sections of Mouse brain across hippocampus stained with ARG10733 anti-c-Fos antibody (red) and co-stained with anti-Fox3 / NeuN antibody (green) using immunofluorescent microscopy. Neurons positive for c-Fos and Fox3 / NeuN appear to be yellow. Inset shows an enlarged image. Nuclei are stained with DAPI (blue).