Mouse monoclonal antibody to rh c-FOS: Affinity purified

Catalogue No.:	M-1752-100
Description:	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. SUBUNIT: Heterodimer. Interacts with DSIPI; this interaction inhibits the binding of active AP1 to its target DNA. Interacts with MAFB. SUBCELLULAR LOCATION: Nucleus. INDUCTION: C-fos expression increases upon a variety of stimuli, including growth factors, cytokines, neurotransmitters, polypeptide hormones, stress and cell injury. SIMILARITY: Belongs to the bZIP family. Fos subfamily. SIMILARITY: Contains 1 bZIP domain (Ref: uniprot.org).
Batch No.:	See product label.
Unit size:	100 µg
Antigen:	Full length, E.coli-derived recombinant human c-FOS protein.
Antibody Type:	Monoclonal
Isotype:	IgG1
Other Names:	Cellular oncogene fos; G0/G1 switch regulatory protein 7; cFOS
Accession:	FOS_HUMAN
Produced in:	Mouse.
Purity:	Affinity purified.
Applications:	Immunohistochemistry (IHC) and immunocytochemistry (ICC): 1-2 µg/mL. This antibody has been shown to work on 4% PFA fixed mouse brain sections. Western blotting (WB): 0.5-1.0 µg/mL. This antibody detects bands between 50-65 kDa, which only appear in stimulated cells. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	Human.
Cross-reactivity:	Horse, cow, pig, chicken, rat, mouse.
Form:	Lyophilized from a solution containing 3% trehalose in PBS, pH 7.4, without preservatives.
Reconstitution:	Reconstitute with 100 µL sterile-filtered, ultrapure water, to achieve an antibody concentration of 1 mg/mL. Centrifuge briefly to remove any insoluble material.
Storage:	Store lyophilised, unopened vial at 2- 8°C or lower. After reconstitution, prepare aliquots and store at -20°C for a higher stability. Avoid freeze-thaw cycles.

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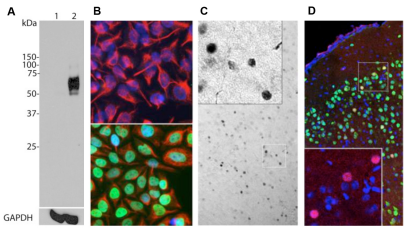
Expiry Date: 12 months after purchase if unopened and stored as indicated.

General References: Vanstraaten et al (1983) Proc. Natl. Acad. Sci. 80: 3183 (Original molecular c-fos sequence paper)

Minson J. et al. (1994) Brain Res. 646: 44-52 (Early IHC localization paper)



A: Western blot analysis of c-Fos expression in HeLa cells using M-1752-100. HeLa cells were serum-starved for 36 hours (Lane 1). Serum-starved HeLa cells were stimulated with 20% FBS for 2 hours (Lane 2). M-1752-100 recognizes bands in the range of 50-65 kDa, which represent multiple forms of c-Fos. A loading control was performed by stripping and re-probing the membrane with a monoclonal antibody against GAPDH, M-1376-250.

B: Immunofluorescence staining of HeLa cells with M-1752-100. c-Fos staining (green) only localizes in the nuclei of 20% FBS stimulated cells (bottom panel), but not in un-stimulated cells (top panel). Cells were counter-stained with Chicken polyclonal antibody against vimentin, C-1409-50 (red) and DAPI (blue).

C: Immunohistochemistry using M-1752-100 on 4% PFA transcardial-perfused mouse brain sections (45 uM thickness). c-FOS immunoreactive cells (dark colour, localized in cell nucleus) were visualized using a standard HRP-DAB (horseradish peroxidase-3,3'-diaminobenzidine) staining technique.

D: Immunohistochemistry using M-1752-100 (red) and Rabbit polyclonal anti-NeuN/Fox3 (R-3770-100, green) on mouse cortical sections. Neurons positive for c-Fos and Fox3/NeuN appear yellow. The insert shows an enlarged image of staining with M-1752-100. Nuclei were labeled with DAPI (blue).

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