

c-FOS monoclonal antibody

Catalog: MB65903

Host: Mouse

Reactivity: Human, Mouse, Rat

BackGround:

The Fos family of nuclear oncogenes includes c-Fos, FosB, Fos-related antigen 1 (FRA1), and Fos-related antigen 2 (FRA2). While most Fos proteins exist as a single isoform, the FosB protein exists as two isoforms: full-length FosB and a shorter form, FosB2 (Delta FosB), which lacks the carboxy-terminal 101 amino acids. The expression of Fos proteins is rapidly and transiently induced by a variety of extracellular stimuli including growth factors, cytokines, neurotransmitters, polypeptide hormones, and stress. Fos proteins dimerize with Jun proteins (c-Jun, JunB, and JunD) to form Activator Protein-1 (AP-1), a transcription factor that binds to TRE/AP-1 elements and activates transcription. Fos and Jun proteins contain the leucine-zipper motif that mediates dimerization and an adjacent basic domain that binds to DNA. The various Fos/Jun heterodimers differ in their ability to transactivate AP-1 dependent genes. In addition to increased expression, phosphorylation of Fos proteins by Erk kinases in response to extracellular stimuli may further increase transcriptional activity. Phosphorylation of c-Fos at Ser32 and Thr232 by Erk5 increases protein stability and nuclear localization. Phosphorylation of FRA1 at Ser252 and Ser265 by Erk1/2 increases protein stability and leads to overexpression of FRA1 in cancer cells. Following growth factor stimulation, expression of FosB and c-Fos in quiescent fibroblasts is immediate, but very short-lived, with protein levels dissipating after several hours. FRA1 and FRA2 expression persists longer, and appreciable levels can be detected in asynchronously growing cells. Deregulated expression of c-Fos, FosB, or FRA2 can result in neoplastic cellular transformation; however, Delta FosB lacks the ability to transform cells.

Product:

Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.

Molecular Weight:

~ 65 kDa

Swiss-Prot:

P01100

Purification&Purity:

The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

Applications:

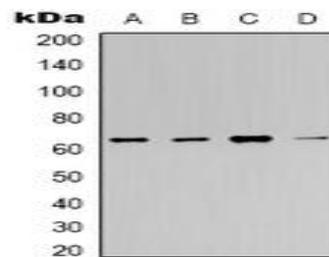
WB (1/1000 - 1/2000), IHC (1/50 - 1/200)

Storage&Stability:

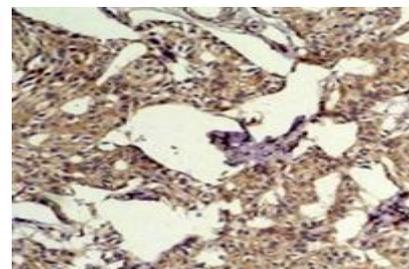
Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of c-FOS protein.

DATA:

Western blot analysis of c-FOS expression in Hela (A), 293T (B), mouse brain (C), rat brain (D) whole cell lysates.



Immunohistochemical analysis of c-FOS staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at

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PRODUCT DATA SHEET

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room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

Note:

For research use only, not for use in diagnostic procedure.

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