SANTA CRUZ BIOTECHNOLOGY, INC.

Fos B (F-7): sc-398595

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The v-Fos oncogene was initially identified as the transforming gene of two independent murine osteosarcoma virus isolates and an avian nephroblastoma virus. The cellular homolog, c-Fos, encodes a nuclear phosphoprotein that is rapidly and transiently induced by a variety of agents and functions as a transcriptional regulator for several genes. In contrast to c-Jun proteins, which form homo- and heterodimers which bind to specific DNA TPAresponse elements (TREs), c-Fos proteins are only active as heterodimers with members of the Jun gene family. Murine Fos B encodes a nuclear protein of 338 amino acids which has 70% homology with c-Fos, exhibits similar kinetics of expression as c-Fos and forms heterodimers with both c-Jun and Jun B which bind to TRE DNA response elements. Functional homologs of c-Fos and Fos B include Fra-1 and Fra-2 genes.

REFERENCES

1. Finkel, M.P., et al. 1966. Virus induction of osteosarcomas in mice. Science 151: 698-701.
2. Curran, T., et al. 1984. FBR murine osteosarcoma virus. Virology 135: 218-228.
3. Sambucetti, L.C., et al. 1986. The Fos protein complex is associated with DNA in isolated nuclei and binds to DNA cellulose. Science 234: 1417-1419.
4. Renz, M., et al. 1987. Chromatin association and DNA-binding properties of the c-Fos protooncogene product. Nucleic Acids Res. 15: 277-292.

CHROMOSOMAL LOCATION

Genetic locus: FOSB (human) mapping to 19q13.32; Fosb (mouse) mapping to 7 A3.

SOURCE

Fos B (F-7) is a mouse monoclonal antibody raised against amino acids 75-150 of Fos B of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-398595 X, 200 µg/0.1 ml.

Fos B (F-7) is available conjugated to agarose (sc-398595 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398595 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398595 PE), fluorescein (sc-398595 FITC), Alexa Fluor® 488 (sc-398595 AF488), Alexa Fluor® 546 (sc-398595 AF546), Alexa Fluor® 594 (sc-398595 AF594) or Alexa Fluor® 647 (sc-398595 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398595 AF680) or Alexa Fluor® 790 (sc-398595 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Fos B (F-7) is recommended for detection of Fos B of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

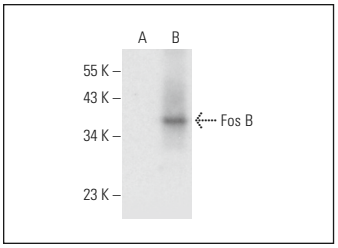
Suitable for use as control antibody for Fos B siRNA (h): sc-35403, Fos B siRNA (m): sc-35404, Fos B shRNA Plasmid (h): sc-35403-SH, Fos B shRNA Plasmid (m): sc-35404-SH, Fos B shRNA (h) Lentiviral Particles: sc-35403-V and Fos B shRNA (m) Lentiviral Particles: sc-35404-V.

Fos B (F-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

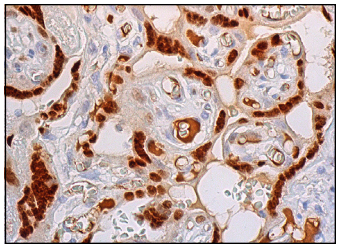
Molecular Weight of Fos B: 45 kDa.

Positive Controls: Fos B (h2): 293T Lysate: sc-177246.

DATA



Fos B (F-7): sc-398595. Western blot analysis of Fos B expression in non-transfected: sc-117752 (**A**) and human Fos B transfected: sc-177246 (**B**) 293T whole cell lysates.



Fos B (F-7): sc-398595. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

1. Chen, L., et al. 2017. Transcriptomes of major renal collecting duct cell types in mouse identified by single-cell RNA-seq. Proc. Natl. Acad. Sci. USA 114: E9989-E9998.
2. Yu, Y., et al. 2021. Circ_0021087 acts as a miR-184 sponge and represses gastric cancer progression by adsorbing miR-184 and elevating FOSB expression. Eur. J. Clin. Invest. 51: e13605.
3. Fang, J., et al. 2022. RRx-001 exerts neuroprotection against LPS-induced microglia activation and neuroinflammation through disturbing the TLR4 pathway. Front. Pharmacol. 13: 889383.
4. Park, S., et al. 2023. The mammalian midbody and midbody remnant are assembly sites for RNA and localized translation. Dev. Cell 58: 1917-1932.e6.
5. Yu, H., et al. 2024. Pathological features and molecular signatures of early olfactory dysfunction in 3xTg-AD model mice. CNS Neurosci. Ther. 30: e14632.

RESEARCH USE

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