SANTA CRUZ BIOTECHNOLOGY, INC.

c-Fos (6-2H-2F): sc-447

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The c-Fos oncogene was initially detected in two independent murine osteosar-coma virus isolates and an avian nephroblastoma virus. The cellular homolog, c-Fos, encodes a nuclear phospho-protein 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 response elements, c-Fos proteins are only active as heterodimers with members of the Jun gene family. Functional homologs of c-Fos include the Fra-1, Fra-2 and Fos B genes. In addition, selected ATF/CREB family members can form leucine zipper dimers with Fos and Jun. Different dimers exhibit differential specificity and affinity for AP-1 and CRE sites.

REFERENCES

1. Finkel, M.P., et al. 1966. Virus induction of osteosarcomas in mice. Science 151: 698-701.
2. 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.

SOURCE

c-Fos (6-2H-2F) is a mouse monoclonal antibody epitope mapping between amino acids 139-211 (leucine zipper) of c-Fos 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-447 X, 200 µg/0.1 ml.

c-Fos (6-2H-2F) is available conjugated to agarose (sc-447 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-447 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-447 PE), fluorescein (sc-447 FITC), Alexa Fluor® 488 (sc-447 AF488), Alexa Fluor® 546 (sc-447 AF546), Alexa Fluor® 594 (sc-447 AF594) or Alexa Fluor® 647 (sc-447 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-447 AF680) or Alexa Fluor® 790 (sc-447 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

c-Fos (6-2H-2F) is recommended for detection of c-Fos, Fos B, Fra-1 and Fra-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

c-Fos (6-2H-2F) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

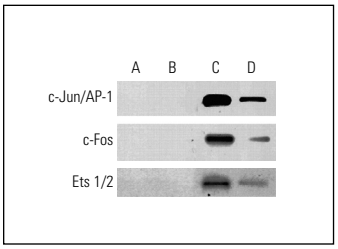
Molecular Weight of c-Fos: 62 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, A-431 nuclear extract: sc-2122 or Y79 nucelar extract: sc-2126.

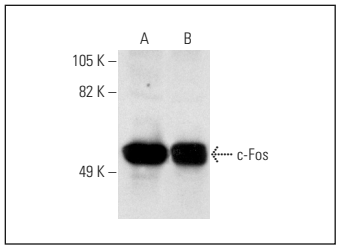
STORAGE

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

DATA



ChiP analysis of transcription factor binding to the CD28 responsive positive regulatory region IV (PRRIV) in resting (**A**,**B**) and CD3 + CD28-stimulated human primary T cells. 10% (**A**,**C**) and 1% (**B**,**D**) of input DNAs were amplified. Antibodies used included c-Jun (**D**): sc-44; c-Fos (6-2H-2F): sc-447 and Ets-1/Ets-2 (C-275): sc-112. Data kindly provided by J. Imbert and reproduced with permission from Yeh, J.H., et al. 2001. Mol. Cell. Biol. 21: 4515-4527.



c-Fos (6-2H-2F): sc-447. Western blot analysis of Fos gene family protein expression in A-431 (**A**) and Y79 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Hirota, K., et al. 1997. AP-1 transcriptional activity is regulated by a direct association between thioredoxin and Ref-1. Proc. Natl. Acad. Sci. USA 94: 3633-3638.
2. Lan, G., et al. 2015. MicroRNA-490-5p is a novel tumor suppressor targeting c-Fos in human bladder cancer. Arch. Med. Sci. 11: 561-569.
3. Li, H., et al. 2016. Characterization of KIR intermediate promoters reveals four promoter types associated with distinct expression patterns of KIR subtypes. Genes Immun. 17: 66-74.
4. Dong, X., et al. 2017. RSPO2 suppresses colorectal cancer metastasis by counteracting the Wnt5a/Fzd7-driven noncanonical Wnt pathway. Cancer Lett. 402: 153-165.
5. Zhang, W., et al. 2018. LOX-1 mediated phenotypic switching of pulmonary arterial smooth muscle cells contributes to hypoxic pulmonary hypertension. Eur. J. Pharmacol. 818: 84-95.
6. Kim, J.H., et al. 2019. *Leonurus sibiricus* L. ethanol extract promotes osteoblast differentiation and inhibits osteoclast formation. Int. J. Mol. Med. 44: 913-926.
7. Woodward, A.M., et al. 2020. Endoplasmic reticulum stress promotes inflammation-mediated proteolytic activity at the ocular surface. Sci. Rep. 10: 2216.
8. Jiang, L., et al. 2021. P2X7R-mediated autophagic impairment contributes to central sensitization in a chronic migraine model with recurrent nitroglycerin stimulation in mice. J. Neuroinflammation 18: 5.

RESEARCH USE

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