SANTA CRUZ BIOTECHNOLOGY, INC.

c-Fos (554C1a): sc-81209

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The c-Fos oncogene was initially detected in two independent murine osteosarcoma virus isolate and an avian nephro-blastoma 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 response elements, c-Fos proteins are only active as heterodimers with members of the Jun gene family. Functional homologs of c-Fos include 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.
3. Nishizawa, M., et al. 1987. An avian transforming retrovirus isolated from a nephroblastoma that carries the Fos gene as the oncogene. J. Virol. 61: 3733-3740.
4. Bohmann, D., et al. 1987. Human proto-oncogene c-Jun encodes a DNA binding protein with structural and functional properties of transcription factor AP-1. Science 238: 1386-1392.
5. Renz, M., et al. 1987. Chromatin association and DNA-binding properties of the c-Fos proto-oncogene product. Nucleic Acids Res. 15: 277-292.
6. Cohen, D.R., et al. 1989. The product of a Fos- related gene, Fra-1, binds cooperatively to the AP-1 site with Jun: transcription factor AP-1 is comprised of multiple protein complexes. Genes Dev. 3: 173-184.
7. Nishina, H., et al. 1990. Isolation and characterization of Fra-2, an additional member of the Fos gene family. Proc. Natl. Acad. Sci. USA 87: 3619-3623.
8. Moghaddam, S.J., et al. 2007. Immunohistochemical analysis of p53, cyclinD1, RB1, c-Fos and N-Ras gene expression in hepatocellular carcinoma in Iran. World J. Gastroenterol. 13: 588-593.
9. Sinnett-Smith, J., et al. 2007. Protein kinase D2 potentiates MEK/ERK/RSK signaling, c-Fos accumulation and DNA synthesis induced by bombesin in Swiss 3T3 cells. J. Cell. Physiol. 211: 781-790.

CHROMOSOMAL LOCATION

Genetic locus: FOS (human) mapping to 14q24.3.

SOURCE

c-Fos (554C1a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of c-Fos of human origin.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

APPLICATIONS

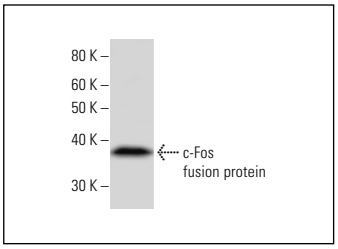
c-Fos (554C1a) is recommended for detection of c-Fos of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for c-Fos siRNA (h): sc-29221, c-Fos shRNA Plasmid (h): sc-29221-SH and c-Fos shRNA (h) Lentiviral Particles: sc-29221-V.

Molecular Weight of c-Fos: 62 kDa.

Positive Controls: Y79 nuclear extract: sc-2126, A-431 nuclear extract: sc-2122 or Jurkat whole cell lysate: sc-2204.

DATA



c-Fos (554C1a): sc-81209. Western Blot analysis of human recombinant c-Fos fusion protein.

SELECT PRODUCT CITATIONS

1. Zhou, P., et al. 2020. Transforming growth factor β (TGF-β) is activated by the CtBP2-p300-AP1 transcriptional complex in chronic renal failure. Int. J. Biol. Sci. 16: 204-215.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **c-Fos (E-8): sc-166940** for c-Fos antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.