SANTA CRUZ BIOTECHNOLOGY, INC.

Fra-1 (B-10): sc-48424

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The v-Fos oncogene was initially detected in two independent murine osteosarcoma virus isolates and an avian nephroblastoma virus. Members of the c-Fos gene family, including c-Fos, Fos B, Fra-1 and Fra-2, encode nuclear phosphoproteins that are rapidly and transiently induced by a variety of agents and function as transcriptional regulators 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. 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. 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.
6. 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.
7. Boise, L.H., et al. 1993. The NFAT-1 DNA binding complex in activated T cells contains Fra-1 and Jun B. Mol. Cell. Biol. 13: 1911-1919.
8. Casalino, L., et al. 2007. Fra-1 promotes growth and survival in Ras-transformed thyroid cells by controlling cyclin A transcription. EMBO J. 26: 1878-1890.
9. Chiappetta, G., et al. 2007. Fra-1 protein overexpression is a feature of hyperplastic and neoplastic breast disorders. BMC Cancer 7: 17.

CHROMOSOMAL LOCATION

Genetic locus: FOSL1 (human) mapping to 11q13.1; Fosl1 (mouse) mapping to 19 A.

SOURCE

Fra-1 (B-10) is a mouse monoclonal antibody rasied against amino acids 1-50 of Fra-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

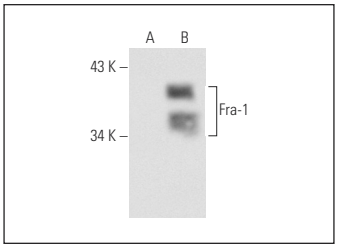
Fra-1 (B-10) is recommended for detection of Fra-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Fra-1 siRNA (h): sc-35405, Fra-1 siRNA (m): sc-35406, Fra-1 shRNA Plasmid (h): sc-35405-SH, Fra-1 shRNA Plasmid (m): sc-35406-SH, Fra-1 shRNA (h) Lentiviral Particles: sc-35405-V and Fra-1 shRNA (m) Lentiviral Particles: sc-35406-V.

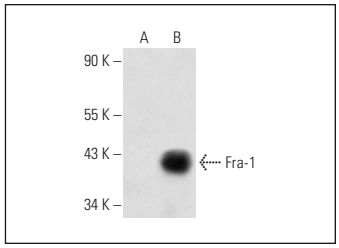
Molecular Weight of Fra-1: 40 kDa.

Positive Controls: 3611-RF nuclear extract: sc-2143, Fra-1 (h): 293T Lysate: sc-176608 or 3611-RF + PMA nuclear extract: sc-2144.

DATA



Fra-1 (B-10): sc-48424. Western blot analysis of Fra-1 expression in non-transfected: sc-117752 (**A**) and human Fra-1 transfected: sc-176608 (**B**) 293T whole cell lysates.



Fra-1 (B-10): sc-48424. Western blot analysis of Fra-1 expression in untreated 3611-RF (**A**) and PMA induced 3611-RF (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Zhang, L., et al. 2017. Dysregulation of Fra1 expression by Wnt/β-catenin signalling promotes glioma aggressiveness through epithelial-mesenchymal transition. Biosci. Rep. 37: BSR20160643.
2. Wang, Z., et al. 2020. Hypermethylation of miR-181b in monocytes is associated with coronary artery disease and promotes M1 polarized phenotype via PIAS1-KLF4 axis. Cardiovasc. Diagn. Ther. 10: 738-751.

STORAGE

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

RESEARCH USE

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