SANTA CRUZ BIOTECHNOLOGY, INC.

p-c-Fos (Thr 232): sc-130181

BACKGROUND

The c-Fos oncogene was initially detected in two independent murine osteosarcoma 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. Human c-Fos may be phosphorylated at Thr 232.

REFERENCES

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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, cyclin D1, 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

p-c-Fos (Thr 232) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 232 phosphorylated c-Fos of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

p-c-Fos (Thr 232) is recommended for detection of Thr 232 phosphorylated c-Fos of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 p-c-Fos: 62 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

SELECT PRODUCT CITATIONS

1. Fischer, H., et al. 2010. Pathogen specific, IRF3-dependent signaling and innate resistance to human kidney infection. PLoS Pathog. 6: e1001109.
2. Dasgupta, S., et al. 2011. Mechanism of lipid induced Insulin resistance: activated PKCε is a key regulator. Biochim. Biophys. Acta 1812: 495-506.
3. Díaz Flaqué, M.C., et al. 2013. Progesterone receptor assembly of a transcriptional complex along with activator protein 1, signal transducer and activator of transcription 3 and ErbB-2 governs breast cancer growth and predicts response to endocrine therapy. Breast Cancer Res. 15: R118.
4. Li, X., et al. 2015. ORF45-mediated prolonged c-Fos accumulation accelerates viral transcription during the late stage of lytic replication of Kaposi's sarcoma-associated herpesvirus. J. Virol. 89: 6895-6906.

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.

PROTOCOLS

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