

Fra-1 (D-3): sc-376148

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 that 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.

REFERENCE

1. Finkel, M.P., et al. 1966. Virus induction of osteosarcomas in mice. *Science* 151: 698-701.
2. Sambucetti, L.C. and Curran, T. 1986. The Fos protein complex is associated with DNA in isolated nuclei and binds to DNA cellulose. *Science* 234: 1417-1419.

CHROMOSOMAL LOCATION

Genetic locus: FOSL1 (human) mapping to 11q13.1; Fos11 (mouse) mapping to 19 A.

SOURCE

Fra-1 (D-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-29 at the N-terminus of Fra-1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-376148 X, 200 µg/0.1 ml.

Fra-1 (D-3) is available conjugated to agarose (sc-376148 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376148 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376148 PE), fluorescein (sc-376148 FITC), Alexa Fluor[®] 488 (sc-376148 AF488), Alexa Fluor[®] 546 (sc-376148 AF546), Alexa Fluor[®] 594 (sc-376148 AF594) or Alexa Fluor[®] 647 (sc-376148 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376148 AF680) or Alexa Fluor[®] 790 (sc-376148 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376148 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

Fra-1 (D-3) 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), 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).

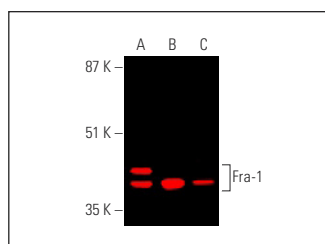
Suitable for use as control antibody for Fra-1 siRNA (h): sc-35405, Fra-1 siRNA (m): sc-35406, Fra-1 shRNA Plasmid (h): sc-35405-SH, Fra-1 shRNA Plasmid (m): sc-35406-SH, Fra-1 shRNA (h) Lentiviral Particles: sc-35405-V and Fra-1 shRNA (m) Lentiviral Particles: sc-35406-V.

Fra-1 (D-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

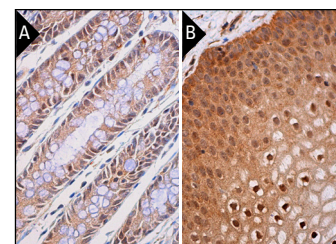
Molecular Weight of Fra-1: 40 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, HeLa nuclear extract: sc-2120 or MDA-MB-435S whole cell lysate: sc-364184.

DATA



Fra-1 (D-3): sc-376148. Near-infrared western blot analysis of Fra-1 expression in NIH/3T3 (A) and HeLa (B) nuclear extracts and MDA-MB-435S whole cell lysate (C). Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.



Fra-1 (D-3): sc-376148. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear and cytoplasmic staining of glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human vagina tissue showing nuclear and cytoplasmic staining of squamous epithelial cells (B).

SELECT PRODUCT CITATIONS

1. Vallejo, A., et al. 2017. An integrative approach unveils FOSL1 as an oncogene vulnerability in KRAS-driven lung and pancreatic cancer. *Nat. Commun.* 8: 14294.
2. Puglisi, R., et al. 2018. SCD5 restored expression favors differentiation and epithelial-mesenchymal reversion in advanced melanoma. *Oncotarget* 9: 7567-7581.
3. Han, Y., et al. 2019. Effects of FOSL1 silencing on osteosarcoma cell proliferation, invasion and migration through the ERK/AP-1 signaling pathway. *J. Cell. Physiol.* 234: 3598-3612.
4. Román, M., et al. 2019. Inhibitor of differentiation-1 sustains mutant KRAS-driven progression, maintenance, and metastasis of lung adenocarcinoma via regulation of a FOSL1 network. *Cancer Res.* 79: 625-638.

RESEARCH USE

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