

# 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., 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.

## CHROMOSOMAL LOCATION

Genetic locus: FOSL1 (human) mapping to 11q13.1; Fos1 (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 IgG<sub>1</sub> 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<sup>®</sup> 488 (sc-376148 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376148 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376148 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376148 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376148 AF680) or Alexa Fluor<sup>®</sup> 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).

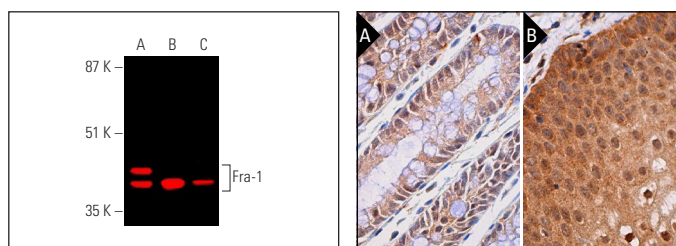
Suitable for use as control antibody for Fra-1 siRNA (h): sc-35405, Fra-1 siRNA (m): sc-35406, Fra-1 shRNA Plasmid (h): sc-35405-SH, Fra-1 shRNA Plasmid (m): sc-35406-SH, Fra-1 shRNA (h) Lentiviral Particles: sc-35405-V and Fra-1 shRNA (m) Lentiviral Particles: sc-35406-V.

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<sup>®</sup> 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. 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.
4. Bishnu, A., et al. 2021. Molecular imaging of the kinetics of hyperactivated ERK1/2-mediated autophagy during acquirement of chemoresistance. *Cell Death Dis.* 12: 161.

## RESEARCH USE

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