SANTA CRUZ BIOTECHNOLOGY, INC.

Fra-1 (C-12): sc-28310

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 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.

CHROMOSOMAL LOCATION

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

SOURCE

Fra-1 (C-12) is a mouse monoclonal antibody raised against amino acids 1-50 of Fra-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-28310 X, 200 µg/0.1 ml.

Fra-1 (C-12) is available conjugated to agarose (sc-28310 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-28310 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-28310 PE), fluorescein (sc-28310 FITC), Alexa Fluor® 488 (sc-28310 AF488), Alexa Fluor® 546 (sc-28310 AF546), Alexa Fluor® 594 (sc-28310 AF594) or Alexa Fluor® 647 (sc-28310 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-28310 AF680) or Alexa Fluor® 790 (sc-28310 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Fra-1 (C-12) is recommended for detection of Fra-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1,000), 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 (C-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

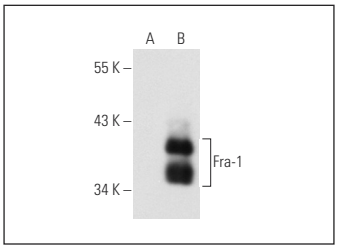
Molecular Weight of Fra-1: 40 kDa.

Positive Controls: Fra-1 (h): 293T Lysate: sc-176608, U-937 cell lysate: sc-2239 or HeLa nuclear extract: sc-2120.

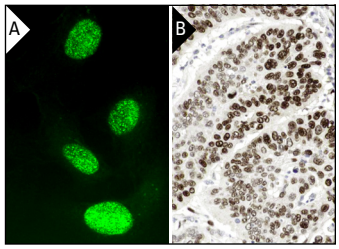
STORAGE

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

DATA



Fra-1 (C-12): sc-28310. 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 (C-12): sc-28310. Immunofluorescence staining of formalin-fixed HepG2 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cervical cancer showing nuclear staining of tumor cells magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Schweppe, R.E., et al. 1997. Functional components of fibroblast growth factor (FGF) signal transduction in pituitary cells. Identification of FGF response elements in the prolactin gene. J. Biol. Chem. 272: 30852-30859.
2. Song, Y., et al. 2008. Fra-1 and Stat3 synergistically regulate activation of human MMP-9 gene. Mol. Immunol. 45: 137-143.
3. Por, E., et al. 2010. The cancer/testis antigen CAGE with oncogenic potential stimulates cell proliferation by up-regulating cyclins D1 and E in an AP-1- and E2F-dependent manner. J. Biol. Chem. 285: 14475-14485.
4. Logullo, A.F., et al. 2011. Role of Fos-related antigen 1 in the progression and prognosis of ductal breast carcinoma. Histopathology 58: 617-625.
5. Wu, J., et al. 2012. MicroRNA-34a inhibits migration and invasion of colon cancer cells via targeting to Fra-1. Carcinogenesis 33: 519-528.
6. Gray, L.T., et al. 2012. Tethering of the conserved piggyBac transposase fusion protein CSB-PGBD3 to chromosomal AP-1 proteins regulates expression of nearby genes in humans. PLoS Genet. 8: e1002972.
7. Hasenfuss, S.C., et al. 2014. Activator protein 1 transcription factor Fos-related antigen 1 (Fra-1) is dispensable for murine liver fibrosis, but modulates xenobiotic metabolism. Hepatology 59: 261-273.
8. Hanson, R.L., et al. 2016. Identification of FRA-1 as a novel player in pancreatic cancer in cooperation with a MUC1: ERK signaling axis. Oncotarget 7: 39996-40011.
9. Na, T.Y., et al. 2017. The trisaccharide raffinose modulates epidermal differentiation through activation of liver X receptor. Sci. Rep. 7: 43823.

RESEARCH USE

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

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