

## c-Fos (E-8): sc-166940



The Power to Question

## 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.

## SOURCE

c-Fos (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 120-155 within an internal region of c-Fos of human 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-166940 X, 200 µg/0.1 ml.

c-Fos (E-8) is available conjugated to agarose (sc-166940 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166940 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166940 PE), fluorescein (sc-166940 FITC), Alexa Fluor® 488 (sc-166940 AF488), Alexa Fluor® 546 (sc-166940 AF546), Alexa Fluor® 594 (sc-166940 AF594) or Alexa Fluor® 647 (sc-166940 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166940 AF680) or Alexa Fluor® 790 (sc-166940 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166940 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

## APPLICATIONS

c-Fos (E-8) is recommended for detection of c-Fos, Fos B, Fra-1 and Fra-2 of mouse, rat, human and zebrafish 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).

c-Fos (E-8) is also recommended for detection of c-Fos, Fos B, Fra-1 and Fra-2 in additional species, including equine, canine, bovine, porcine and avian.

c-Fos (E-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

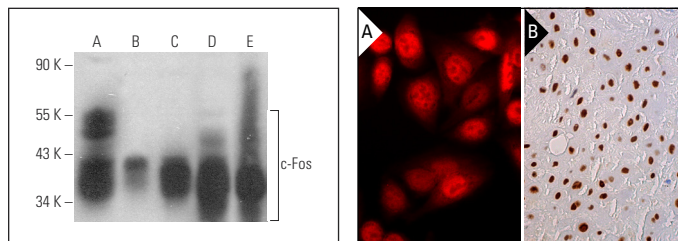
Molecular Weight of c-Fos: 62 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, MIA PaCa-2 cell lysate: sc-2285 or HeLa whole cell lysate: sc-2200.

## STORAGE

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

## DATA



c-Fos (E-8): sc-166940. Western blot analysis of c-Fos expression in HeLa (A), MIA PaCa-2 (B), NIH/3T3 (C) and A-431 (D) whole cell lysates and NIH/3T3 nuclear extract (E).

c-Fos (E-8) Alexa Fluor® 594: sc-166940 AF594. Direct immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of decidual cells (B).

## SELECT PRODUCT CITATIONS

1. Wrona, D., et al. 2013. Chronic antidepressant desipramine treatment increases open field-induced brain expression and spleen production of interleukin 10 in rats. *Brain Res. Bull.* 99: 117-131.
2. Beauchemin, M., et al. 2015. Dynamic microRNA-101a and Fosab expression controls zebrafish heart regeneration. *Development* 142: 4026-4037.
3. Li, Y., et al. 2016. Protein kinase A-independent ras protein activation cooperates with Rap1 protein to mediate activation of the extracellular signal-regulated kinases (ERK) by cAMP. *J. Biol. Chem.* 291: 21584-21595.
4. Dey, I. and Bradbury, N.A. 2017. Activation of TPA-response element present in human lemur tyrosine kinase 2 (lmtk2) gene increases its expression. *Biochem. Biophys. Rep.* 12: 140-150.
5. Özdemir, S., et al. 2018. Cypermethrin, chlorpyrifos, deltamethrin, and imidacloprid exposure up-regulates the mRNA and protein levels of BDNF and c-Fos in the brain of adult zebrafish (*Danio rerio*). *Chemosphere* 203: 318-326.
6. Yeo, S.H., et al. 2019. Mapping neuronal inputs to Kiss1 neurons in the arcuate nucleus of the mouse. *PLoS ONE* 14: e0213927.
7. Okusha, Y., et al. 2020. Rab11A functions as a negative regulator of osteoclastogenesis through dictating lysosome-induced proteolysis of c-fms and RANK surface receptors. *Cells* 9: 2384.
8. Fang, X., et al. 2021. Chronic unpredictable stress induces depression-related behaviors by suppressing AgRP neuron activity. *Mol. Psychiatry* 26: 2299-2315.

## RESEARCH USE

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

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