SANTA CRUZ BIOTECHNOLOGY, INC.

USF-2 (C-20): sc-862

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The ubiquitously expressed cellular upstream stimulatory factor (USF) consists of USF-1 and USF-2 polypeptides which independently exhibit site-specific DNA binding and are members of the c-Myc-related family of regulatory factors containing helix-loop-helix domains. USF also contains a leucine repeat that is required for efficient DNA binding. USF was originally identified as an upstream stimulatory factor that binds the core sequence CACGTG in the adenovirus late promoter. These findings, together with the demonstration of cooperative interaction between USF and the initiator-binding protein TFII-I, raise the possibility of a more general involvement of USF in transcriptional regulation. While expression of both USF-1 and USF-2 species is ubiquitous, different ratios of USF homo- and hetero-dimers are found in different cell types.

CHROMOSOMAL LOCATION

Genetic locus: USF2 (human) mapping to 19q13.12; Usf2 (mouse) mapping to 7 B1.

SOURCE

USF-2 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of USF-2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG 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-862 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-862 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USF-2 (C-20) is recommended for detection of USF-2 p44 of mouse, rat and 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)], 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).

USF-2 (C-20) is also recommended for detection of USF-2 p44 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for USF-2 siRNA (h): sc-36786, USF-2 siRNA (m): sc-36785, USF-2 shRNA Plasmid (h): sc-36786-SH, USF-2 shRNA Plasmid (m): sc-36785-SH, USF-2 shRNA (h) Lentiviral Particles: sc-36786-V and USF-2 shRNA (m) Lentiviral Particles: sc-36785-V.

USF-2 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

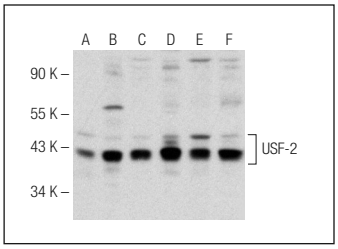
Molecular Weight of USF-2: 44 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, NIH/3T3 nuclear extract: sc-2138 or KNRK nuclear extract: sc-2141.

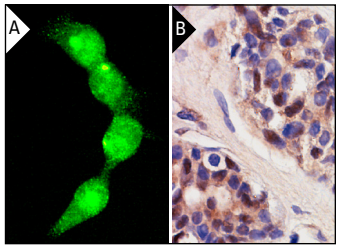
STORAGE

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

DATA



USF-2 (C-20): sc-862. Western blot analysis of USF-2 expression in HeLa (**A**), NIH/3T3 (**B**), A-431 (**C**), Jurkat (**D**), K-562 (**E**) and IMR-32 (**F**) nuclear extracts.



USF-2 (C-20): sc-862. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing nuclear staining (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast tumor showing nuclear staining (**B**).

SELECT PRODUCT CITATIONS

1. Lanigan, T.M. and Russo, A.F. 1997. Binding of upstream stimulatory factor and a cell-specific activator to the calcitonin-calcitonin gene-related peptide enhancer. J. Biol. Chem. 272: 18316-18324.
2. Kennedy, H.J., et al. 1997. Upstream stimulatory factor-2 (USF2) activity is required for glucose stimulation of L-pyruvate kinase promoter activity in single living islet β-cells. J. Biol. Chem. 272: 20636-20640.
3. Lin, I.J., et al. 2009. Calpeptin increases the activity of upstream stimulatory factor and induces high level globin gene expression in erythroid cells. J. Biol. Chem. 284: 20130-20135.
4. Yu, J., et al. 2010. MTMR4 attenuates transforming growth factor β (TGFβ) signaling by dephosphorylating R-Smads in endosomes. J. Biol. Chem. 285: 8454-8462.
5. Deenick, E.K., et al. 2010. c-Rel phenocopies PKCθ but not Bcl-10 in regulating $CD8^+$ T-cell activation versus tolerance. Eur. J. Immunol. 40: 867-877.
6. Yamamoto, T., et al. 2010. Protein kinase Cβ mediates hepatic induction of sterol-regulatory element binding protein-1c by Insulin. J. Lipid Res. 51: 1859-1870.
7. Zhou, Z., et al. 2010. USF and NF-E2 cooperate to regulate the recruitment and activity of RNA polymerase II in the β-globin gene locus. J. Biol. Chem. 285: 15894-15905.

RESEARCH USE

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