SANTA CRUZ BIOTECHNOLOGY, INC.

USF-2 (E-3): sc-518074

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, raises 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 heterodimers are found in different cell types.

REFERENCES

1. Sawadogo, M., et al. 1985. Inter-action of a gene-specific transcription factor with the adenovirus major late promoter upstream of the TATA box region. Cell 43: 165-175.
2. Carthew, R.W., et al. 1985. An RNA polymerase II transcription factor binds to an upstream element in the adenovirus major late promoter. Cell 43: 439-448.
3. Sawadogo, M., et al. 1988. Multiple forms of the human gene-specific transcription factor USF-1. Complete purification and identification of USF from HeLa cell nuclei. J. Biol. Chem. 263: 11985-11993.

CHROMOSOMAL LOCATION

Genetic locus: Usf2 (mouse) mapping to 7 B1.

SOURCE

USF-2 (E-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 320-346 at the C-terminus of USF-2 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-518074 X, 200 µg/0.1 ml.

USF-2 (E-3) is available conjugated to agarose (sc-518074 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518074 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518074 PE), fluorescein (sc-518074 FITC), Alexa Fluor® 488 (sc-518074 AF488), Alexa Fluor® 546 (sc-518074 AF546), Alexa Fluor® 594 (sc-518074 AF594) or Alexa Fluor® 647 (sc-518074 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518074 AF680) or Alexa Fluor® 790 (sc-518074 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

USF-2 (E-3) is recommended for detection of USF-2 p44 of mouse and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

USF-2 (E-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

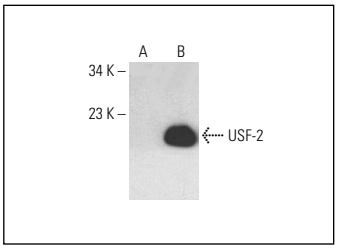
Molecular Weight of USF-2: 44 kDa.

Positive Controls: USF-2 (m): 293T Lysate: sc-127754.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



USF-2 (E-3): sc-518074. Western blot analysis of USF-2 expression in non-transfected: sc-117752 (**A**) and mouse USF-2 transfected: sc-127754 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Almada, L.L., et al. 2023. GLI1, a novel target of the ER stress regulator p97/VCP, promotes ATF6f-mediated activation of XBP1. Biochim. Biophys. Acta Gene Regul. Mech. 1866: 194924.

RESEARCH USE

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