SANTA CRUZ BIOTECHNOLOGY, INC.

USF-2 (5E9): sc-293443

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. Interaction 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.

CHROMOSOMAL LOCATION

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

SOURCE

USF-2 (5E9) is a mouse monoclonal antibody raised against amino acids 1-100 representing partial length USF-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

USF-2 (5E9) is recommended for detection of USF-2 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).

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.

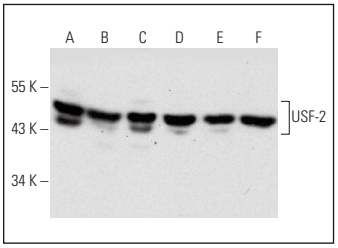
Molecular Weight of USF-2: 44 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, SHP-77 whole cell lysate: sc-364258 or SK-N-SH cell lysate: sc-2410.

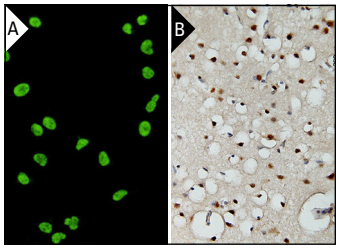
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



USF-2 (5E9): sc-293443. Western blot analysis of USF-2 expression in Jurkat (**A**), SHP-77 (**B**), SK-N-SH (**C**), NIH/3T3 (**D**) and RAW 264.7 (**E**) whole cell lysates and KNRK nuclear extract (**F**).



USF-2 (5E9): sc-293443. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing nuclear staining of neuronal cells and glial cells (**B**).

SELECT PRODUCT CITATIONS

1. Kallenberger, L., et al. 2019. Ectopic methylation of a single persistently unmethylated CpG in the promoter of the vitellogenin gene abolishes its inducibility by estrogen through attenuation of upstream stimulating factor binding. Mol. Cell. Biol. 39: e00436-19.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.