

USF-2 (N-18): sc-861

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 (N-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-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-861 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-861 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USF-2 (N-18) 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) 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.

USF-2 (N-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of USF-2: 44 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, HeLa nuclear extract: sc-2120 or K-562 nuclear extract: sc-2130.

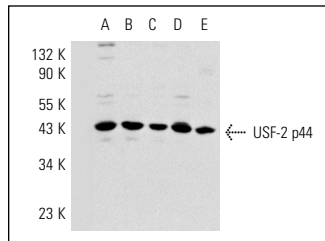
STORAGE

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.

DATA



USF-2 (N-18): sc-861. Western blot analysis of USF-2 p44 expression in HeLa (A), Jurkat (B), K-562 (C), A-431 (D) and phorbol-induced NIH/3T3 (E) nuclear extracts.

SELECT PRODUCT CITATIONS

- Wallin, J.J., et al. 1999. B cell-specific activator protein prevents two activator factors from binding to the immunoglobulin J chain promoter until the antigen-driven stages of B cell development. *J. Biol. Chem.* 274: 15959-15965.
- 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.
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- Pedersen, K.B., et al. 2010. Glucose induces expression of rat pyruvate carboxylase through a carbohydrate response element in the distal gene promoter. *Biochem. J.* 426: 159-170.
- Molle, C., et al. 2010. Critical role of the IFN-stimulated gene factor 3 complex in TLR-mediated IL-27p28 gene expression revealing a two-step activation process. *J. Immunol.* 184: 1784-1792.
- Galibert, M.D. and Baron, Y. 2010. Identification of specific protein/E-box-containing DNA complexes: lessons from the ubiquitously expressed USF transcription factors of the b-HLH-LZ super family. *Methods Mol. Biol.* 647: 391-406.
- Terragni, J., et al. 2011. The E-box binding factors Max/Mnt, MITF, and USF1 act coordinately with FoxO to regulate expression of proapoptotic and cell cycle control genes by phosphatidylinositol 3-kinase/Akt/glycogen synthase kinase 3 signaling. *J. Biol. Chem.* 286: 36215-36227.


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Try **USF-2 (5E9): sc-293443**, our highly recommended monoclonal alternative to USF-2 (N-18).