

USF-1 (C-20): sc-229

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.

CHROMOSOMAL LOCATION

Genetic locus: USF1 (human) mapping to 1q23.3; Usf1 (mouse) mapping to 1 H3.

SOURCE

USF-1 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of USF-1 of human origin.

PRODUCT

Each vial contains 100 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-229 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-229 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

USF-1 (C-20) is recommended for detection of USF-1 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-1 (C-20) is also recommended for detection of USF-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for USF-1 siRNA (h): sc-36783, USF-1 siRNA (m): sc-36784, USF-1 shRNA Plasmid (h): sc-36783-SH, USF-1 shRNA Plasmid (m): sc-36784-SH, USF-1 shRNA (h) Lentiviral Particles: sc-36783-V and USF-1 shRNA (m) Lentiviral Particles: sc-36784-V.

USF-1 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

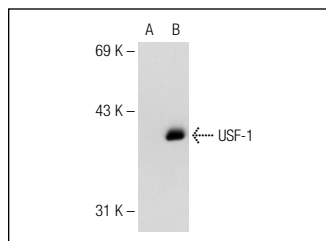
Molecular Weight of USF-1: 43 kDa.

Positive Controls: USF-1 (m): 293T Lysate: sc-124487, NIH/3T3 nuclear extract: sc-2138 or Jurkat nuclear extract: sc-2132.

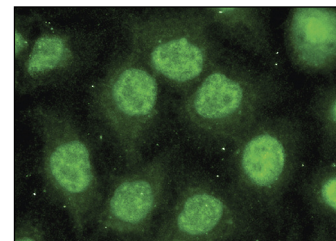
STORAGE

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

DATA



USF-1 (C-20): sc-229. Western blot analysis of USF-1 expression in non-transfected: sc-117752 (A) and mouse USF-1 transfected: sc-124487 (B) 293T whole cell lysates.



USF-1 (C-20): sc-229. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Sieweke, M., et al. 1998. Cooperative interaction of Ets-1 with USF-1 required for HIV-1 enhancer activity in T cells. *EMBO J.* 17: 1728-1739.
2. 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.
3. 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.
4. Abe, M., et al. 2011. Mechanisms of confluence-dependent expression of CD26 in colon cancer cell lines. *BMC Cancer* 11: 51.
5. 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.
6. Veronese, A., et al. 2011. Mutated β -catenin evades a microRNA-dependent regulatory loop. *Proc. Natl. Acad. Sci. USA* 12: 4840-4845.
7. Kim, J., et al. 2012. *In vivo* regulation of the heme oxygenase-1 gene in humanized transgenic mice. *Kidney Int.* 82: 278-91.

RESEARCH USE

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

MONOS
Satisfaction
Guaranteed

Try **USF-1 (G-2): sc-390027** or **USF-1 (B-9): sc-390033**, our highly recommended monoclonal alternatives to USF-1 (C-20).