

# USF-2 (C-13): sc-30901

## 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

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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.
4. Gregor, P.D., et al. 1990. The adenovirus major late transcription factor USF is a member of the helix-loop-helix group of regulatory proteins and binds to DNA as a dimer. *Genes Dev.* 4: 1730-1740.
5. Beckmann, H., et al. 1991. The leucine zipper of TFE3 dictates helix-loop-helix dimerization specificity. *Genes Dev.* 5: 1057-1066.
6. Roy, A.L., et al. 1991. Cooperative interaction of an initiator-binding transcription initiation factor and the helix-loop-helix activator USF. *Nature* 354: 245-248.
7. Kirschbaum, B.J., et al. 1992. Definition of the transcriptional activation domain of recombinant 43-kilodalton USF. *Mol. Cell. Biol.* 12: 5094-5101.
8. Sirtio, M., et al. 1994. Ubiquitous expression of the 43- and 44-kDa forms of transcription factor USF in mammalian cells. *Nucleic Acids Res.* 22: 427-433.

## CHROMOSOMAL LOCATION

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

## SOURCE

USF-2 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of USF-2 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30900 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

USF-2 (C-13) 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), 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).

USF-2 (C-13) is also recommended for detection of USF-2 in additional species, including 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.

Molecular Weight of USF-2: 44 kDa.

Positive Controls: NIH/3T3 nuclear extract: sc-2138, HeLa nuclear extract: sc-2120 or KNRK nuclear extract: sc-2141.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **USF-2 (5E9): sc-293443**, our highly recommended monoclonal alternative to USF-2 (C-13).