

# USF-1 (B-9): sc-390033



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.

## CHROMOSOMAL LOCATION

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

## SOURCE

USF-1 (B-9) is a mouse monoclonal antibody raised against amino acids 75-160 of USF-1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> 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-390033 X, 200 µg/0.1 ml.

## APPLICATIONS

USF-1 (B-9) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

USF-1 (B-9) is also recommended for detection of USF-1 in additional species, including 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 siRNA (r): sc-270501, USF-1 shRNA Plasmid (h): sc-36783-SH, USF-1 shRNA Plasmid (m): sc-36784-SH, USF-1 shRNA Plasmid (r): sc-270501-SH, USF-1 shRNA (h) Lentiviral Particles: sc-36783-V, USF-1 shRNA (m) Lentiviral Particles: sc-36784-V and USF-1 shRNA (r) Lentiviral Particles: sc-270501-V.

USF-1 (B-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

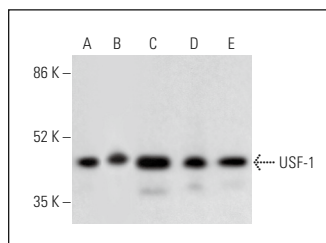
Molecular Weight of USF-1: 43 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, MCF7 whole cell lysate: sc-2206 or K-562 whole cell lysate: sc-2203.

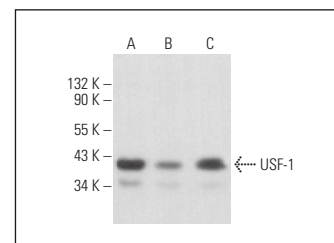
## RECOMMENDED SUPPORT REAGENTS

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-1 (B-9): sc-390033. Western blot analysis of USF-1 expression in NIH/3T3 (A) and Jurkat (B) nuclear extracts and K-562 (C), MCF7 (D) and RPE-J (E) whole cell lysates.



USF-1 (B-9): sc-390033. Western blot analysis of USF-1 expression in MCF7 (A), SP2/O (B) and RAW 264.7 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Mori, J., et al. 2022. Identification of cell cycle-associated and -unassociated regulators for expression of a hepatocellular carcinoma oncogene cyclin-dependent kinase inhibitor 3. *Biochem. Biophys. Res. Commun.* 625: 46-52.
- Takamatsu, N., et al. 2023. Heat shock factor 1 induces a short burst of transcription of the clock gene *Per2* during interbout arousal in mammalian hibernation. *J. Biol. Chem.* 299: 104576.

## 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](http://www.scbt.com) for detailed protocols and support products.