



USF-1 (h2): 293T Lysate: sc-158055

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 kDa USF. *Mol. Cell. Biol.* 12: 5094-5101.

CHROMOSOMAL LOCATION

Genetic locus: USF1 (human) mapping to 1q23.3.

PRODUCT

USF-1 (h2): 293T Lysate represents a lysate of human USF-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

APPLICATIONS

USF-1 (h2): 293T Lysate is suitable as a Western Blotting positive control for human reactive USF-1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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