

ATF-7 (S-15): sc-19764

BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors, which bind modular cis acting promoter and enhancer elements. The cAMP response element (CRE) consists of the palindromic octanucleotide TGACGTCa. There are several CRE binding proteins within the ATF/CREB family, including CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. A novel basic leucine zipper (bZIP) protein, designated ATF-7, is closely related to members of the ATF/CREB family of bZIP proteins, with highest homology to ATF-4. ATF-7 physically interacts with the PRL-1 protein-tyrosine phosphatase (PTPase), which is a predominately nuclear, farnesylated PTPase. ATF-7 homodimers bind specifically to CRE elements. ATF-7 is expressed in a number of different tissues and is expressed in association with differentiation. ATF-7 and PRL-1 interact with each other through the bZIP region of ATF-7 and the phosphatase domain of PRL-1. In addition, PRL-1 is able to dephosphorylate ATF-7 *in vitro*.

REFERENCES

1. Montminy, M.R., et al. 1986. Identification of a cyclic-AMP-response element within the rat somatostatin gene. *Proc. Natl. Acad. Sci. USA* 83: 6682-6686.
2. Lin, Y.S. and Green, M.R. 1988. Interaction of a common cellular transcription factor, ATF, with regulatory elements in both Ela-inducible and cyclic AMP-inducible promoters. *Proc. Natl. Acad. Sci. USA* 85: 3396-3400.
3. Hoeffler, J.P., et al. 1988. Cyclic AMP-responsive DNA-binding protein: structure based on a cloned placental cDNA. *Science* 242: 1430-1433.
4. Hai, T., et al. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. *Genes Dev.* 8: 2083-2090.
5. Maekawa, T., et al. 1989. Leucine zipper structure of the protein CRE-BP1 binding to the cyclic AMP response element in brain. *EMBO J.* 8: 2023-2028.

CHROMOSOMAL LOCATION

Genetic locus: ATF7 (human) mapping to 12q13.13; Atf7 (mouse) mapping to 15 F3.

SOURCE

ATF-7 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ATF-7 of human origin.

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-19764 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-19764 X, 200 µg/0.1 ml.

APPLICATIONS

ATF-7 (S-15) is recommended for detection of ATF-7 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).

ATF-7 (S-15) is also recommended for detection of ATF-7 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ATF-7 siRNA (h): sc-29759, ATF-7 siRNA (m): sc-29760, ATF-7 shRNA Plasmid (h): sc-29759-SH, ATF-7 shRNA Plasmid (m): sc-29760-SH, ATF-7 shRNA (h) Lentiviral Particles: sc-29759-V and ATF-7 shRNA (m) Lentiviral Particles: sc-29760-V.

ATF-7 (S-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

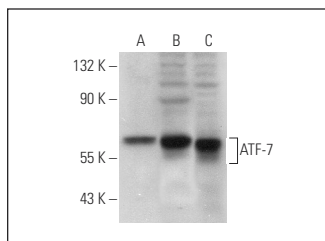
Molecular Weight of ATF-7: 44 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, Jurkat nuclear extract: sc-2132 or RAW 264.7 whole cell lysate: sc-2211.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ATF-7 (S-15): sc-19764. Western blot analysis of ATF-7 expression in RAW 264.7 whole cell lysate (A) and HeLa (B) and Jurkat (C) nuclear extracts.

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.