

ATF-1 (H-3): sc-365525

BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors that bind modular cis acting promoter and enhancer elements. The ATF/CREB transcription factor family binds the palindromic cAMP response element (CRE) octanucleotide TGACGTCA. The ATF/CREB family includes CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. This family of proteins contain highly divergent N-terminal domains, but share a C-terminal leucine zipper for dimerization and DNA binding. ATF-1 is shown to play a key role in the induction of NOX1, this protein binds the cAMP response element (CRE) and mediates PKA-induced stimulation of CRE-reporter genes. ATF-2 forms homodimers and heterodimers with c-Jun to initiate CRE-dependent transcription. Phosphorylation of ATF-2 at Thr 69 and Thr 71 by stress-activated kinases is necessary for transcriptional activation. Myc also induces phosphorylation of ATF-2 at Thr 69 and Thr 71 to prolong the half-life of ATF-2. ATF-2 functions as a histone acetyltransferase (HAT) and acetylates Histones H2B and H4 specifically *in vitro*.

CHROMOSOMAL LOCATION

Genetic locus: ATF1 (human) mapping to 12q13.12; Atf1 (mouse) mapping to 15 F1.

SOURCE

ATF-1 (H-3) is a mouse monoclonal antibody raised against amino acids 1-60 mapping at the N-terminus of ATF-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-365525 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

ATF-1 (H-3) is recommended for detection of ATF-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for ATF-1 siRNA (h): sc-29754, ATF-1 siRNA (m): sc-29755, ATF-1 shRNA Plasmid (h): sc-29754-SH, ATF-1 shRNA Plasmid (m): sc-29755-SH, ATF-1 shRNA (h) Lentiviral Particles: sc-29754-V and ATF-1 shRNA (m) Lentiviral Particles: sc-29755-V.

ATF-1 (H-3) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

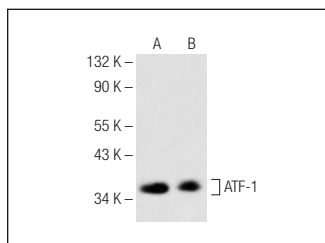
Molecular Weight of ATF-1: 35 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A-431 whole cell lysate: sc-2201 or Jurkat nuclear extract: sc-2132.

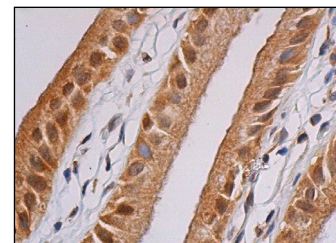
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



ATF-1 (H-3): sc-365525. Western blot analysis of ATF-1 expression in Jurkat (A) and HeLa (B) nuclear extracts.



ATF-1 (H-3): sc-365525. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing nuclear and cytoplasmic staining of glandular cells.

STORAGE

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

PROTOCOLS

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



See **ATF-1 (25C10G): sc-270** for ATF-1 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.