SANTA CRUZ BIOTECHNOLOGY, INC.

ATF-2 (C-19): sc-187

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors which bind modular cis acting promotor 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-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 also functions as a histone acetyltransferase (HAT) by specifically acetylating histones H2B and H4 *in vitro*.

CHROMOSOMAL LOCATION

Genetic locus: ATF2 (human) mapping to 2q31.1; Atf2 (mouse) mapping to 2 C3.

SOURCE

ATF-2 (C-19) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of ATF-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-187 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-187 X, 200 µg/0.1 ml.

APPLICATIONS

ATF-2 (C-19) is recommended for detection of ATF-2 of mouse, rat, human and *Xenopus laevis* 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), 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).

ATF-2 (C-19) is also recommended for detection of ATF-2 in additional species, including canine.

Suitable for use as control antibody for ATF-2 siRNA (h): sc-29205, ATF-2 siRNA (m): sc-29756, ATF-2 shRNA Plasmid (h): sc-29205-SH, ATF-2 shRNA Plasmid (m): sc-29756-SH, ATF-2 shRNA (h) Lentiviral Particles: sc-29205-V and ATF-2 shRNA (m) Lentiviral Particles: sc-29756-V.

ATF-2 (C-19) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

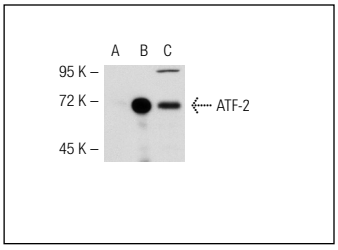
Molecular Weight of ATF-2: 70 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, HeLa whole cell lysate: sc-2200 or ATF-2 (m): 293T Lysate: sc-126459.

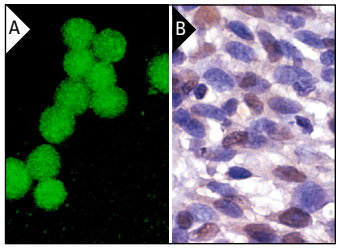
STORAGE

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

DATA



ATF-2 (C-19): sc-187. Western blot analysis of ATF-2 expression in non-transfected 293T: sc-117752 (**A**), mouse ATF-2 transfected 293T: sc-126459 (**B**) and HeLa (**C**) whole cell lysates



ATF-2 (C-19): sc-187. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear localization (**A**). Immunoperoxidase staining of formalin-fixed, paraffin-embedded human tonsil tissue showing nuclear staining (**B**).

SELECT PRODUCT CITATIONS

1. Fritz, G., et al. 2001. Transcriptional activation of the small GTPase gene rhoB by genotoxic stress is regulated via a CCAAT element. Nucleic Acids Res. 29: 792-798.
2. Fritz, G. and Kaina, B. 2001. Ras-related GTPase RhoB represses NFκB signaling. J. Biol. Chem. 276: 3115-3122.
3. Kumawat, K., et al. 2010. Exogenous Nef is an inhibitor of *Mycobacterium tuberculosis*-induced tumor necrosis factor-α production and macrophage apoptosis. J. Biol. Chem. 285: 12629-12637.
4. Geissinger, E., et al. 2010. Disturbed expression of the T-cell receptor/CD3 complex and associated signaling molecules in CD30+ T-cell lymphoproliferations. Haematologica 95: 1697-1704.
5. McAllister, C.S., et al. 2010. Mechanisms of protein kinase PKR-mediated amplification of β interferon induction by C protein-deficient measles virus. J. Virol. 84: 380-386.
6. Su, B., et al. 2011. Stage-associated dynamic activity profile of transcription factors in nasopharyngeal carcinoma progression based on protein/DNA array analysis. OMICS 15: 49-60.
7. Guillaumond, F., et al. 2011. Chromatin remodeling as a mechanism for circadian prolactin transcription: rhythmic NONO and SFPQ recruitment to HLTF. FASEB J. 25: 2740-2756.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **ATF-2 (F2BR-1): sc-242**, our highly recommended monoclonal alternative to ATF-2 (C-19). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ATF-2 (F2BR-1): sc-242**.