SANTA CRUZ BIOTECHNOLOGY, INC.

ATF-2 (N-96): sc-6233

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 (N-96) is a rabbit polyclonal antibody raised against amino acids 1-96 of ATF-2 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-187 X, 200 µg/0.1 ml.

APPLICATIONS

ATF-2 (N-96) is recommended for detection of ATF-2 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), 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 (N-96) is also recommended for detection of ATF-2 in additional species, including equine, canine, bovine, porcine and avian.

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 (N-96) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ATF-2: 70 kDa.

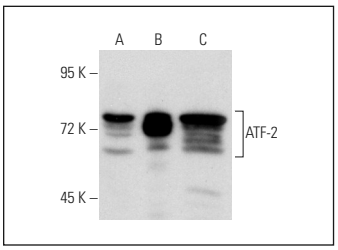
STORAGE

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

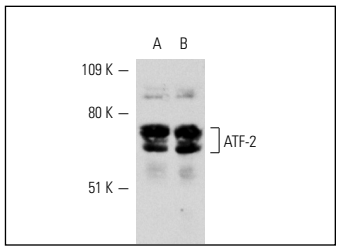
RESEARCH USE

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

DATA



ATF-2 (N-96): sc-6233. 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 (N-96): sc-6233. Western blot analysis of ATF-2 expression in K-562 (**A**) and A-673 (**B**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Foltz, I.N., et al. 1997. Homopoietic growth factors with the exception of interleukin-4 activate the p38 mitogen-activated protein kinase pathway. J. Biol. Chem. 272: 3296-3301.
2. Ciccone, N.A., et al. 2008. A composite element that binds basic helix loop helix and basic leucine zipper transcription factors is important for gonadotropin-releasing hormone regulation of the follicle-stimulating hormone β gene. Mol. Endocrinol. 22: 1908-1923.
3. Prassas, I., et al. 2008. High-throughput screening identifies cardiac glycosides as potent inhibitors of human tissue kallikrein expression: implications for cancer therapies. Clin. Cancer Res. 14: 5778-5784.
4. Shah, M., et al. 2010. A role for ATF2 in regulating MITF and melanoma development. PLoS Genet. 6: e1001258.
5. Liss, A.S., et al. 2010. Cell transformation by v-Rel reveals distinct roles of AP-1 family members in Rel/NFκB oncogenesis. Oncogene 29: 4925-4937.
6. Yaniv, S.P., et al. 2010. Dexamethasone enhances the norepinephrine-induced ERK/MAPK intracellular pathway possibly via dysregulation of the α2-adrenergic receptor: implications for antidepressant drug mechanism of action. Eur. J. Cell Biol. 89: 712-722.
7. Lim, E.J., et al. 2011. Epigenetic regulation of the IL-13-induced human eotaxin-3 gene by CREB-binding protein-mediated histone 3 acetylation. J. Biol. Chem. 286: 13193-13204.
8. Oleaga, C., et al. 2012. Coffee polyphenols change the expression of STAT5B and ATF-2 modifying cyclin D1 levels in cancer cells. Oxid. Med. Cell. Longev. 2012: 390385.

MONOS Satisfaction Guaranteed

Try **ATF-2 (F2BR-1): sc-242**, our highly recommended monoclonal aternatives to ATF-2 (N-96). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **ATF-2 (F2BR-1): sc-242**.