SANTA CRUZ BIOTECHNOLOGY, INC.

ATF-3 (A-8): sc-518032

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 cAMP response element (CRE), one of the best studied of such elements, consists of the palindromic octanucleotide TGACGTCA. Several CRE binding proteins have been identified within the ATF/CREB family, the best characterized of which include CREB-1, CREB-2 (also designated ATF-4), ATF-1, ATF-2 and ATF-3. These proteins share highly related COOH terminal leucine zipper dimerization and basic DNA binding domains but are highly divergent in their amino terminal domains. Although each of the ATF/CREB proteins appear capable of binding CRE in its homodimeric form, certain of these also bind as heterodimers, both within the ATF/CREB family and even with members of the AP-1 transcription factor family.

REFERENCES

1. Montminy, M.R., et al. 1986. Identification of a cyclic-AMP-responsive 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- 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.

CHROMOSOMAL LOCATION

Genetic locus: ATF3 (human) mapping to 1q32.3; Atf3 (mouse) mapping to 1 H6.

SOURCE

ATF-3 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 154-181 at the C-terminus of ATF-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} 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-518032 X, 200 µg/0.1 ml.

ATF-3 (A-8) is available conjugated to agarose (sc-518032 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518032 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518032 PE), fluorescein (sc-518032 FITC), Alexa Fluor® 488 (sc-518032 AF488), Alexa Fluor® 546 (sc-518032 AF546), Alexa Fluor® 594 (sc-518032 AF594) or Alexa Fluor® 647 (sc-518032 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518032 AF680) or Alexa Fluor® 790 (sc-518032 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

ATF-3 (A-8) is recommended for detection of ATF-3 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

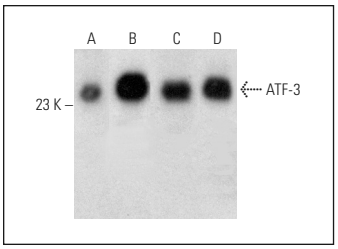
Suitable for use as control antibody for ATF-3 siRNA (h): sc-29757, ATF-3 siRNA (m): sc-29758, ATF-3 siRNA (r): sc-72029, ATF-3 shRNA Plasmid (h): sc-29757-SH, ATF-3 shRNA Plasmid (m): sc-29758-SH, ATF-3 shRNA Plasmid (r): sc-72029-SH, ATF-3 shRNA (h) Lentiviral Particles: sc-29757-V, ATF-3 shRNA (m) Lentiviral Particles: sc-29758-V and ATF-3 shRNA (r) Lentiviral Particles: sc-72029-V.

ATF-3 (A-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

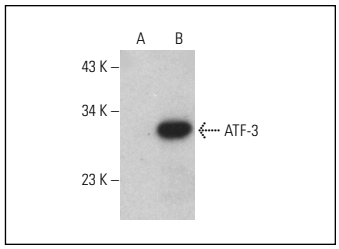
Molecular Weight of ATF-3: 21 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEK293 whole cell lysate: sc-45136 or U-251-MG whole cell lysate: sc-364176.

DATA



ATF-3 (A-8): sc-518032. Western blot analysis of ATF-3 expression in HeLa (**A**), HEK293 (**B**), SR (**C**) and U-251-MG (**D**) whole cell lysates.



ATF-3 (A-8): sc-518032. Western blot analysis of ATF-3 expression in non-transfected (**A**) and mouse ATF-3 transfected (**B**) HEK293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, L., et al. 2020. ATF3 demethylation promotes the transcription of ARL4C, which acts as a tumor suppressor in human breast cancer. Onco Targets Ther. 13: 3467-3476.
2. Bhattacharya, B., et al. 2021. The integrated stress response mediates necrosis in murine *Mycobacterium tuberculosis* granulomas. J. Clin. Invest. 131: e130319.
3. Zhou, C., et al. 2022. 3,4',5-trimethoxy-*trans*-stilbene alleviates endothelial dysfunction in diabetic and obese mice via activation of the AMPK/SIRT1/eNOS pathway. Antioxidants 11: 1286.
4. Zhou, Y.W., et al. 2022. Substrate viscoelasticity amplifies distinctions between transient and persistent LPS-induced signals. Adv. Healthc. Mater. 11: e2102271.

RESEARCH USE

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