

# ATF-3 (H-90): sc-22798

## 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), 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

ATF-3 (H-90) is a rabbit polyclonal antibody raised against amino acids 1-90 of ATF-3 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 agarose conjugate for immunoprecipitation, sc-22798 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-22798 X, 200 µg/0.1 ml.

## APPLICATIONS

ATF-3 (H-90) is recommended for detection of ATF-3 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).

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

ATF-3 (H-90) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ATF-3: 21 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211 or RAW 264.7 treated PMA whole cell lysate.

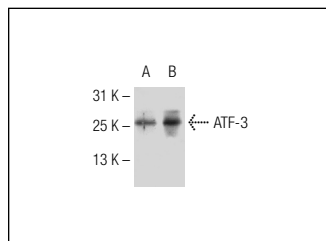
## RESEARCH USE

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

## STORAGE

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

## DATA



ATF-3 (H-90): sc-22798. Western blot analysis of ATF-3 expression in RAW 264.7 (A) and PMA treated RAW 264.7 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Lobsiger, C.S., et al. 2007. Toxicity from different SOD1 mutants dysregulates the complement system and the neuronal regenerative response in ALS motor neurons. *Proc. Natl. Acad. Sci. USA* 104: 7319-7326.
2. Hamamura, K., et al. 2007. Stress to endoplasmic reticulum of mouse osteoblasts induces apoptosis and transcriptional activation for bone remodeling. *FEBS Lett.* 581: 1769-1774.
3. Brüning, A., et al. 2008. Bortezomib treatment of ovarian cancer cells mediates endoplasmic reticulum stress, cell cycle arrest, and apoptosis. *Invest. New Drugs* 27: 543-551.
4. 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  $\beta$  gene. *Mol. Endocrinol.* 22: 1908-1923.
5. Zhang, Y., et al. 2010. The flavoheme reductase Ncb5or protects cells against endoplasmic reticulum stress-induced lipotoxicity. *J. Lipid Res.* 51: 53-62.
6. Fischer, G., et al. 2011. Direct injection into the dorsal root ganglion: technical, behavioral, and histological observations. *J. Neurosci. Methods* 199: 43-55.
7. Ge, D., et al. 2013. Phosphorylation and nuclear translocation of integrin  $\beta$ 4 induced by a chemical small molecule contribute to apoptosis in vascular endothelial cells. *Apoptosis* 18: 1120-1131.

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Try **ATF-3 (44C3a): sc-81189**, our highly recommended monoclonal alternative to ATF-3 (H-90).