SANTA CRUZ BIOTECHNOLOGY, INC.

p-ATF-2 (Thr 69): sc-101637

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*.

REFERENCES

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3. Hai, T., Liu, F., Coukos, W.J. and Green, M.R. 1989. Transcription factor ATF cDNA clones: an extensive family of leucine zipper proteins able to selectively form DNA-binding heterodimers. Genes Dev. 8: 2083-2090.
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8. Miethe, J., Schwartz, C., Wottrich, K., Wenning, D. and Klempnauer, K.H. 2001. Crosstalk between Myc and activating transcription factor-2 (ATF-2): Myc prolongs the half-life and induces phosphorylation of ATF-2. Oncogene 20: 8116-8124.

STORAGE

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

CHROMOSOMAL LOCATION

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

SOURCE

p-ATF-2 (Thr 69) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Thr 69 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.

APPLICATIONS

p-ATF-2 (Thr 69) is recommended for detection of Ser 69 phosphorylated ATF-2 of human origin and correspondingly phosphorylated Ser 51 of mouse and rat origin by immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

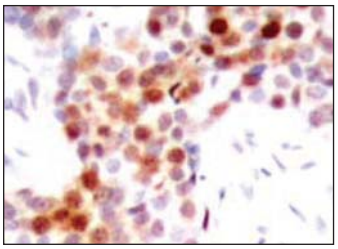
Suitable for use as control antibody for ATF-2 siRNA (h): sc-29205 and ATF-2 siRNA (m): sc-29756.

Molecular Weight of p-ATF-2: 70 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 2) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



p-ATF-2 (Thr 69): sc-101637. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human breast carcinoma tissue extract showing nuclear staining.

RESEARCH USE

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

PROTOCOLS

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