

# p-ATF-2 (Thr 73/55): sc-101638

## BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors which bind modular *cis*-acting promoter 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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5. van Dam, H., Duyndam, M., Rottier, R., Bosch, A., de Vries-Smits, L., Herrlich, P., Zantema, A., Angel, P. and van der Eb, A.J. 1993. Heterodimer formation of c-Jun and ATF-2 is responsible for induction of c-Jun by the 243 amino acid adenovirus E1A protein. *EMBO J.* 12: 479-487.
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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 73/55) is a rabbit polyclonal antibody raised against a short amino acid sequence containing phosphorylated Thr 73/55 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 73/55) is recommended for detection of Ser 73 phosphorylated ATF-2 of human origin and correspondingly phosphorylated Ser 55 of mouse and rat origin by immunofluorescence and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

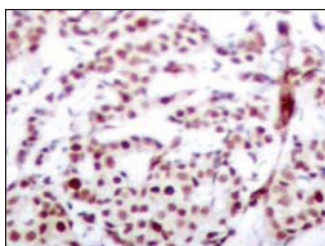
Suitable for use as control antibody for ATF-2 siRNA (h): sc-29205 and ATF-2 siRNA (m): sc-29756.

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 73/55): sc-101638. 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.