

ATF-2 (ATF25I062): sc-81188

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*. The gene encoding human ATF-2 maps to chromosome 2q31.1.

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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CHROMOSOMAL LOCATION

Genetic locus: ATF2 (human) mapping to 2q31.1.

SOURCE

ATF-2 (ATF25I062) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of ATF-2 of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% BSA.

APPLICATIONS

ATF-2 (ATF25I062) is recommended for detection of ATF-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1–2 µg per 100–500 µg of total protein (1 ml of cell lysate)].

Suitable for use as control antibody for ATF-2 siRNA (h): sc-29205, ATF-2 shRNA Plasmid (h): sc-29205-SH and ATF-2 shRNA (h) Lentiviral Particles: sc-29205-V.

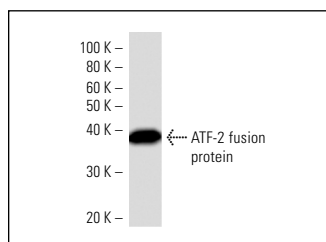
Molecular Weight of ATF-2: 70 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, A-673 nuclear extract: sc-2128 or ATF-2 (m): 293T Lysate: sc-126459.

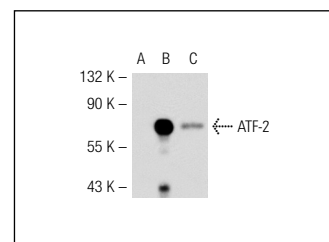
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



ATF-2 (ATF25I062): sc-81188. Western blot analysis of human recombinant ATF-2 fusion protein.



ATF-2 (ATF25I062): sc-81188. 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.

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.

PROTOCOLS

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