



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# ATF-1 (m): 293T Lysate: sc-118601

## BACKGROUND

Eukaryotic gene transcription is regulated by sequence-specific transcription factors that 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-1 is shown to play a key role in the induction of NOX1, this protein binds the cAMP response element (CRE) and mediates PKA-induced stimulation of CRE-reporter genes. 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 functions as a histone acetyltransferase (HAT) and acetylates Histones H2B and H4 specifically *in vitro*.

## REFERENCES

1. Montminy, M.R., Sevarino, K.A., Wagner, J.A., Mandel, G. and Goodman, R.H. 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. 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.
4. Diep, A., Li, C., Klisak, I., Mohandas, T., Sparkes, R.S., Gaynor, R. and Lusis, A.J. 1991. Assignment of the gene for cyclic AMP-response element binding protein 2 (CREB-2) to human chromosome 2q24.1-q32. *Genomics* 11: 1161-1163.
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 cJun and ATF-2 is responsible for induction of c-Jun by the 243 amino acid adenovirus E1A protein. *EMBO J.* 12: 479-487.
6. van Dam, H., Wilhelm, D., Herr, I., Steffen, A., Herrlich, P. and Angel, P. 1995. ATF-2 is preferentially activated by stress-activated protein kinases to mediate c-Jun induction in response to genotoxic agents. *EMBO J.* 14: 1798-1811.
7. Kawasaki, H., Schiltz, L., Chiu, R., Itakura, K., Taira, K., Nakatani, Y. and Yokoyama, K.K. 2000. ATF-2 has intrinsic histone acetyltransferase activity which is modulated by phosphorylation. *Nature* 405: 195-200.
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 ATF2. *Oncogene* 20: 8116-8124.

## CHROMOSOMAL LOCATION

Genetic locus: Atf1 (mouse) mapping to 15 F1.

## PRODUCT

ATF-1 (m): 293T Lysate represents a lysate of mouse ATF-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## APPLICATIONS

ATF-1 (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive ATF-1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

## STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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](http://www.scbt.com) for detailed protocols and support products.