

# ATBF1 (C-15): sc-21044

## BACKGROUND

AT-motif binding factor 1 (ATBF1) binds to the AT-rich core sequence element in the human  $\alpha$ -fetoprotein enhancer. Alternative splicing generates the ATBF1-A and the ATBF1-B. While ATBF1-A contains a 920 amino acid extension at the N-terminus, both ATBF1-A and ATBF1-B contain 4 DNA-binding homeobox domains. Additionally, ATBF1-A contains 23 zinc finger motifs while ATBF1-B contains 18 zinc finger motifs. The N-terminal extension unique to ATBF1-A has transcriptional repressor activity. In the small intestine, ATBF1-A inhibits expression of the brushborder enzyme aminopeptidase-N through direct binding to the AT motif element. Besides functioning in transcription regulation, ATBF1 also functions in ATPase activity. ATPase activity associated with ATBF1-A is DNA/RNA-dependent and requires both homeobox domains and zinc finger motifs. ATBF1 is highly expressed in spleen and brain tissues. The gene encoding human ATBF1 maps to chromosome 16q22.2.

## REFERENCES

1. Morinaga, T., et al. 1991. A human  $\alpha$ -fetoprotein enhancer-binding protein, ATBF1, contains four homeodomains and seventeen zinc fingers. *Mol. Cell. Biol.* 11: 6041-6049.
2. Yasuda, H., et al. 1994. ATBF1, a multiple-homeodomain zinc finger protein, selectively down-regulates AT-rich elements of the human  $\alpha$ -fetoprotein gene. *Mol. Cell. Biol.* 14: 1395-1401.
3. Miura, Y., et al. 1995. Cloning and characterization of an ATBF1 isoform that expresses in a neuronal differentiation-dependent manner. *J. Biol. Chem.* 270: 26840-26848.
4. Yamada, K., et al. 1995. Assignment of the human ATBF1 transcription factor gene to chromosome 16q22.3-q23.1. *Genomics* 29: 552-553.
5. Kaspar, P., et al. 1999. Myb-interacting protein, ATBF1, represses transcriptional activity of Myb oncoprotein. *J. Biol. Chem.* 274: 14422-14428.
6. Kataoka, H., et al. 2000. AT motif binding factor 1-A (ATBF1-A) negatively regulates transcription of the aminopeptidase N gene in the crypt-villus axis of small intestine. *Biochem. Biophys. Res. Commun.* 267: 91-95.

## CHROMOSOMAL LOCATION

Genetic locus: ZFX3 (human) mapping to 16q22.2; Zfx3 (mouse) mapping to 8 D3.

## SOURCE

ATBF1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ATBF1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-21044 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-21044 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ATBF1 (C-15) is recommended for detection of ATBF1-A and ATBF1-B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ATBF1 (C-15) is also recommended for detection of ATBF1-A and ATBF1-B in additional species, including equine, canine, porcine and avian.

Suitable for use as control antibody for ATBF1 siRNA (h): sc-37694, ATBF1 siRNA (m): sc-37695, ATBF1 shRNA Plasmid (h): sc-37694-SH, ATBF1 shRNA Plasmid (m): sc-37695-SH, ATBF1 shRNA (h) Lentiviral Particles: sc-37694-V and ATBF1 shRNA (m) Lentiviral Particles: sc-37695-V.

ATBF1 (C-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ATBF1-A: 404 kDa.

Molecular Weight of ATBF1-B: 306 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **ATBF1 (3B1): sc-517126**, our highly recommended monoclonal alternative to ATBF1 (C-15).