SANTA CRUZ BIOTECHNOLOGY, INC.

ATBF1 (G-13): sc-21162

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

AT-motif binding factor 1 (ATBF1) binds to the AT-rich core sequence element in the human α-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 α-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 α-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: ZFHX3 (human) mapping to 16q22.2; Zfhx3 (mouse) mapping to 8 D3.

SOURCE

ATBF1 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ATBF1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-21162 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ATBF1 (G-13) 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).

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 (G-13) 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™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) 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™ 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 or our catalog for detailed protocols and support products.