ATF-5 (N-16): sc-46934



The Power to Question

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 best characterized members of this gene family include CREB-1, CREB-2 (also designated ATF-4), CRE-BPa, LZIP (also designated CREB3 and Luman), CREM-1, CREM-2, ATF-1, ATF-2, ATF-3, ATF-6 and ATF-7. This family of proteins contain highly divergent N-terminal domains, but share a C-terminal leucine zipper for dimerization and DNA binding. ATF-5 (ATFx), which can localize to the cytoplasm or the nucleus, binds DNA as a dimer. It interacts with CCND3 and PTP4A1.

REFERENCES

- Pati, D., Meistrich, M.L. and Plon, S.E. 1999. Human Cdc34 and Rad6B ubiquitin-conjugating enzymes target repressors of cyclic AMP-induced transcription for proteolysis. Mol. Cell. Biol. 19: 5001-5013.
- Hansen, M.B., Mitchelmore, C., Kjaerulff, K.M., Rasmussen, T.E., Pedersen, K.M. and Jensen, N.A. 2002. Mouse ATF-5: molecular cloning of two novel mRNAs, genomic organization and odorant sensory neuron localization. Genomics 80: 344-350.
- 3. Morris, J.A., Kandpal, G., Ma, L. and Austin, C.P. 2003. DISC-1 (disrupted-in-schizophrenia 1) is a centrosome-associated protein that interacts with MAP1A, MIPT3, ATF4/5 and NUDEL: regulation and loss of interaction with mutation. Hum. Mol. Genet. 12: 1591-1608.
- Angelastro, J.M., Ignatova, T.N., Kukekov, V.G., Steindler, D.A., Stengren, G.B., Mendelsohn, C. and Greene, L.A. 2003. Regulated expression of ATF-5 is required for the progression of neural progenitor cells to neurons. J. Neurosci. 23: 4590-4600.
- Fernandez, P., Carretero, J., Medina, P.P., Jimenez, A.I., Rodriguez-Perales, S., Paz, M.F., Cigudosa, J.C., Esteller, M., Lombardia, L., Morente, M., Sanchez-Verde, L., Sotelo, T. and Sanchez-Cespedes, M. 2004. Distinctive gene expression of human lung adenocarcinomas carrying LKB1 mutations. Oncogene 23: 5084-5091.
- Angelastro, J.M., Mason, J.L., Ignatova, T.N., Kukekov, V.G., Stengren, G.B., Goldman, J.E. and Greene, L.A. 2005. Downregulation of activating transcription factor 5 is required for differentiation of neural progenitor cells into astrocytes. J. Neurosci. 25: 3889-3899.

CHROMOSOMAL LOCATION

Genetic locus: ATF5 (human) mapping to 19q13.33; Atf5 (mouse) mapping to 7 B4.

SOURCE

ATF-5 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of ATF-5 of human origin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 200 μg lgG 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-46934 X, 200 μg /0.1 ml.

Blocking peptide available for competition studies, sc-46934 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ATF-5 (N-16) is recommended for detection of ATF-5 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); may cross-react with ATF-7 in mouse.

ATF-5 (N-16) is also recommended for detection of ATF-5 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for ATF-5 siRNA (h): sc-43580, ATF-5 siRNA (m): sc-60222, ATF-5 shRNA Plasmid (h): sc-43580-SH, ATF-5 shRNA Plasmid (m): sc-60222-SH, ATF-5 shRNA (h) Lentiviral Particles: sc-43580-V and ATF-5 shRNA (m) Lentiviral Particles: sc-60222-V.

ATF-5 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of ATF-5: 31 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) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **ATF-5 (E-10):** sc-377168, our highly recommended monoclonal alternative to ATF-5 (N-16).

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**