



p-B-ATF (Thr 48): sc-30444

BACKGROUND

B-ATF is a nuclear basic leucine zipper protein that belongs to the AP-1/ATF superfamily of transcription factors. The leucine zipper of B-ATF mediates dimerization with members of the Jun family of proteins. The B-ATF protein does not homodimerize efficiently, but rather forms a heterodimer preferentially with c-Jun. The B-ATF/c-Jun protein complex can interact with DNA containing a consensus binding site for AP-1, suggesting that B-ATF functions as a tissue-specific modulator of the AP-1 transcription complex in human cells. B-ATF also associates with IFP35, a leucine zipper protein that translocates to the nucleus following IFN treatment. The gene encoding B-ATF, also designated SFA-2, is strongly expressed in mature T and B lymphocytes, and is up-regulated after transformation by human T-cell leukemia virus type I. Phosphorylation of B-ATF on Ser43 and Thr48 regulates DNA binding.

REFERENCES

1. Dorsey, M.J., Tae, H.J., Sollenberger, K.G., Mascarenhas, N.T., Johansen, L.M. and Taparowsky, E.J. 1995. B-ATF: a novel human bZIP protein that associates with members of the AP-1 transcription factor family. *Oncogene* 11: 2255-2265.
2. Hasegawa, H., Utsunomiya, Y., Kishimoto, K., Tange, Y., Yasukawa, M. and Fujita, S. 1996. SFA-2, a novel bZIP transcription factor induced by human T cell leukemia virus type I, is highly expressed in mature lymphocytes. *Biochem. Biophys. Res. Commun.* 222: 164-170.
3. Wang, X., Johansen, L.M., Tae, H.J. and Taparowsky, E.J. 1996. IFP 35 forms complexes with B-ATF, a member of the AP1 family of transcription factors. *Biochem. Biophys. Res. Commun.* 229: 316-322.
4. Meyer, N.P., Johansen, L.M., Tae, H.J., Budde, P.P., Williams, K.L. and Taparowsky, E.J. 1998. Genomic organization of human B-ATF, a target for regulation by EBV and HTLV-1. *Mamm. Genome* 9: 849-852.
5. Echlin, D.R., Tae, H.J., Mitin, N. and Taparowsky, E.J. 2000. B-ATF functions as a negative regulator of AP-1 mediated transcription and blocks cellular transformation by Ras and Fos. *Oncogene* 19: 1752-1763.
6. Deppmann, C.D., Thornton, T.M., Utama, F.E and Taparowsky, E.J. 2003. Phosphorylation of B-ATF regulates DNA binding: a novel mechanism for AP-1 (activator protein-1) regulation. *Biochem. J.* 374: 423-431.

CHROMOSOMAL LOCATION

Genetic locus: BATF (human) mapping to 14q24.3; Batf (mouse) mapping to 12 D2.

SOURCE

p-B-ATF (Thr 48) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Thr 48 phosphorylated B-ATF 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-30444 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-B-ATF (Thr 48) is recommended for detection of Thr 48 phosphorylated B-ATF 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).

p-B-ATF (Thr 48) is also recommended for detection of correspondingly phosphorylated B-ATF in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for B-ATF siRNA (h): sc-45978, B-ATF siRNA (m): sc-45979, B-ATF shRNA Plasmid (h): sc-45978-SH, B-ATF shRNA Plasmid (m): sc-45979-SH, B-ATF shRNA (h) Lentiviral Particles: sc-45978-V and B-ATF shRNA (m) Lentiviral Particles: sc-45979-V.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.