

# B-ATF (WW8): sc-100974

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

B-ATF (WW8) is a mouse monoclonal antibody raised against recombinant B-ATF of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

B-ATF (WW8) is recommended for detection of B-ATF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

Molecular Weight of B-ATF: 14 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HeLa whole cell lysate: sc-2200 or B-ATF (h): 293T lysate: sc-114821.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

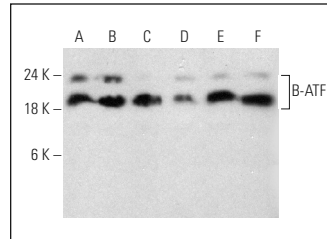
## STORAGE

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

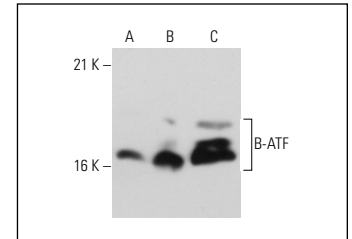
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



B-ATF (WW8): sc-100974. Western blot analysis of B-ATF expression in SW480 (A), HeLa (B), Jurkat (C), RAW 264.7 (D), NIH/3T3 (E) and PC-12 (F) whole cell lysates.



B-ATF (WW8): sc-100974. Western blot analysis of B-ATF expression in non-transfected 293T: sc-117752 (A), human B-ATF transfected 293T: sc-114821 (B) and SW480 (C) whole cell lysates.

## SELECT PRODUCT CITATIONS

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- Li, P., et al. 2012. BATF-Jun is critical for IRF4-mediated transcription in T cells. *Nature* 490: 543-546.
- Jabeen, R., et al. 2013. Th9 cell development requires a BATF-regulated transcriptional network. *J. Clin. Invest.* 11: 4641-4653.
- Yamazaki, S., et al. 2017. The AP-1 transcription factor JunB is required for Th17 cell differentiation. *Sci. Rep.* 7: 17402.
- Roth, T.L., et al. 2018. Reprogramming human T cell function and specificity with non-viral genome targeting. *Nature* 559: 405-409.
- Gupta, S., et al. 2018. IL-6 augments IL-4-induced polarization of primary human macrophages through synergy of Stat3, Stat6 and BATF transcription factors. *Oncoimmunology* 7: e1494110.
- Wu, B., et al. 2018. RAS P21 protein activator 3 (RASA3) specifically promotes pathogenic T helper 17 cell generation by repressing T helper 2 cell-biased programs. *Immunity* 49: 886-898.
- Koizumi, S.I., et al. 2018. JunB regulates homeostasis and suppressive functions of effector regulatory T cells. *Nat. Commun.* 9: 5344.
- Rizk, J., et al. 2019. SMAC mimetics promote NIK-dependent inhibition of CD4<sup>+</sup> TH17 cell differentiation. *Sci. Signal.* 12 pii: eaaw3469.
- Hosokawa, H., et al. 2019. Cell type-specific actions of Bcl11b in early T-lineage and group 2 innate lymphoid cells. *J. Exp. Med.* 217 pii: e20190972.
- Henriksson, J., et al. 2019. Genome-wide CRISPR screens in T helper cells reveal pervasive crosstalk between activation and differentiation. *Cell* 176: 882-896.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.