

# Produktinformation



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## Zuschläge

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#### SANTA CRUZ BIOTECHNOLOGY, INC.

## **B-ATF shRNA (h) Lentiviral Particles:** sc-45978-V



#### 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 upregulated after transformation by human T cell leukemia virus type I.

#### REFERENCES

- 1. Dorsey, M.J., et al. 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., et al. 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., et al. 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., et al. 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., et al. 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.

#### CHROMOSOMAL LOCATION

Genetic locus: BATF (human) mapping to 14q24.3.

#### PRODUCT

B-ATF shRNA (h) Lentiviral Particles is a pool of concentrated, transductionready viral particles containing 3 target-specific constructs that encode 19-25 nt (plus hairpin) shRNA designed to knock down gene expression. Each vial contains 200 µl frozen stock containing 1.0 x 10<sup>6</sup> infectious units of virus (IFU) in Dulbecco's Modified Eagle's Medium with 25 mM HEPES pH 7.3. Suitable for 10-20 transductions. Also see B-ATF siRNA (h): sc-45978 and B-ATF shRNA Plasmid (h): sc-45978-SH as alternate gene silencing products.

#### **RESEARCH USE**

The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product and all replicates and derivatives for research purposes conducted by the buyer in his laboratory only (whether the buyer is an academic or for-profit entity). The buyer cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party, or otherwise use this product or its components or materials made using this product or its components for Commercial Purposes.

#### **APPLICATIONS**

B-ATF shRNA (h) Lentiviral Particles is recommended for the inhibition of B-ATF expression in human cells.

#### SUPPORT REAGENTS

Control shRNA Lentiviral Particles: sc-108080. Available as 200 µl frozen viral stock containing 1.0 x 10<sup>6</sup> infectious units of virus (IFU); contains an shRNA construct encoding a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA.

#### GENE EXPRESSION MONITORING

B-ATF (H-19): sc-15280 is recommended as a control antibody for monitoring of B-ATF gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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™ 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.

#### **RT-PCR REAGENTS**

Semi-quantitative RT-PCR may be performed to monitor B-ATF gene expression knockdown using RT-PCR Primer: B-ATF (h)-PR: sc-45978-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

#### **BIOSAFETY**

Lentiviral particles can be employed in standard Biosafety Level 2 tissue culture facilities (and should be treated with the same level of caution as with any other potentially infectious reagent). Lentiviral particles are replication-incompetent and are designed to self-inactivate after transduction and integration of shRNA constructs into genomic DNA of target cells.

#### **STORAGE**

Store lentiviral particles at -80° C. Stable for at least one year from the date of shipment. Once thawed, particles can be stored at 4° C for up to one week. Avoid repeated freeze thaw cycles.

#### **PROTOCOLS**

See our web site at www.scbt.com or our catalog for detailed protocols and support products.