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## Produktinformation



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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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# B-ATF siRNA (m): sc-45979

## 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., 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. IFP35 forms complexes with B-ATF, a member of the AP-1 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.

## CHROMOSOMAL LOCATION

Genetic locus: *Batf* (mouse) mapping to 12 D2.

## PRODUCT

B-ATF siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see B-ATF shRNA Plasmid (m): sc-45979-SH and B-ATF shRNA (m) Lentiviral Particles: sc-45979-V as alternate gene silencing products.

For independent verification of B-ATF (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-45979A, sc-45979B and sc-45979C.

## PROTOCOLS

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

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

B-ATF siRNA (m) is recommended for the inhibition of B-ATF expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

B-ATF (WW8): sc-100974 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 reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## SELECT PRODUCT CITATIONS

1. Gong, S., Li, J., Ma, L., Li, K., Zhang, L., Wang, G., Liu, Y., Ji, X., Liu, X., Chen, P., Ouyang, R., Zhang, S., Zhou, Z., Wang, C.Y., Xiang, X. and Yang, Y. 2013. Blockade of dopamine D1-like receptor signalling protects mice against OVA-induced acute asthma by inhibiting B-cell activating transcription factor signalling and Th17 function. *FEBS J.* 280: 6262-6273.

## RESEARCH USE

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