SANTA CRUZ BIOTECHNOLOGY, INC.

BAFL siRNA (m): sc-141464

BACKGROUND

Belonging to the BAF protein family, BAFL (barrier-to-autointegration factor-like protein) is a 90 amino acid protein that plays a role in the regulation of BAF, a protein that influences nuclear assembly, gene expression, gonad development and chromatin organization. Predominantly residing in the nucleus, BAFL exists as either a homodimer or as a heterodimer with BAF. Together, the BAF/BAFL heterodimer binds to DNA to regulate gene transcription, however the DNA interaction is only made possible through the BAF subunit, as BAFL does not bind DNA. BAFL is highly expressed in pancreas and testis, and has been shown to be upregulated during spermiogenesis. Both heart and skeletal muscle are tissues affected in Emery-Dreifuss muscular dystrophy (EDMD) and it is suggested that these tissues are more vulnerable to the loss of emerin and Lamin A due to the lack of regulation of BAF, which binds both proteins that are implicated in EDMD. Significantly, no expression of BAFL was found in skeletal tissue, kidney or heart.

REFERENCES

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2. Haraguchi, T., et al. 2001. BAF is required for emerin assembly into the reforming nuclear envelope. J. Cell Sci. 114: 4575-4585.
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4. Holaska, J.M., et al. 2003. Transcriptional repressor germ cell-less (GCL) and barrier to autointegration factor (BAF) compete for binding to emerin *in vitro*. J. Biol. Chem. 278: 6969-6975.
5. Shimi, T., et al. 2004. Dynamic interaction between BAF and emerin revealed by FRAP, FLIP, and FRET analyses in living HeLa cells. J. Struct. Biol. 147: 31-41.
6. Tifft, K.E., et al. 2006. Barrier-to-autointegration factor-like (BAF-L): a proposed regulator of BAF. Exp. Cell Res. 312: 478-487.
7. Bengtsson, L., et al. 2006. Barrier-to-autointegration factor phosphorylation on Ser-4 regulates emerin binding to Lamin A *in vitro* and emerin localization *in vivo*. Mol. Biol. Cell 17: 1154-1163.

CHROMOSOMAL LOCATION

Genetic locus: Banf2 (mouse) mapping to 2 G1.

PRODUCT

BAFL siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BAFL shRNA Plasmid (m): sc-141464-SH and BAFL shRNA (m) Lentiviral Particles: sc-141464-V as alternate gene silencing products.

RESEARCH USE

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

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

BAFL siRNA (m) is recommended for the inhibition of BAFL 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 µM in 66 µl. 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.

PROTOCOLS

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