SANTA CRUZ BIOTECHNOLOGY, INC.

BAFL (F-12): sc-85288

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

1. Lee, K.K., Haraguchi, T., Lee, R.S., Koujin, T., Hiraoka, Y. and Wilson, K.L. 2001. Distinct functional domains in emerin bind Lamin A and DNA-bridging protein BAF. J. Cell Sci. 114: 4567-4573.
2. Haraguchi, T., Koujin, T., Segura-Totten, M., Lee, K.K., Matsuoka, Y., Yoneda, Y., Wilson, K.L. and Hiraoka, Y. 2001. BAF is required for emerin assembly into the reforming nuclear envelope. J. Cell Sci. 114: 4575-4585.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 181350. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Holaska, J.M., Lee, K.K., Kowalski, A.K. and Wilson, K.L. 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., Koujin, T., Segura-Totten, M., Wilson, K.L., Haraguchi, T. and Hiraoka, Y. 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., Segura-Totten, M., Lee, K.K. and Wilson, K.L. 2006. Barrier-to-autointegration factor-like (BAFL): a proposed regulator of BAF. Exp. Cell Res. 312: 478-487.
7. Bengtsson, L. and Wilson, K.L. 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 (human) mapping to 20p12.1; Banf2 (mouse) mapping to 2 G1.

SOURCE

BAFL (F-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of BAFL of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85288 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

BAFL (F-12) is recommended for detection of BAFL 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).

BAFL (F-12) is also recommended for detection of BAFL in additional species, including porcine.

Suitable for use as control antibody for BAFL siRNA (h): sc-72599, BAFL siRNA (m): sc-141464, BAFL shRNA Plasmid (h): sc-72599-SH, BAFL shRNA Plasmid (m): sc-141464-SH, BAFL shRNA (h) Lentiviral Particles: sc-72599-V and BAFL shRNA (m) Lentiviral Particles: sc-141464-V.

Molecular Weight of BAFL: 12 kDa.

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 A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 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.