SANTA CRUZ BIOTECHNOLOGY, INC.

Bfk siRNA (h): sc-88409

BACKGROUND

Bfk, also known as BCL2L15, is a 163 amino acid protein and novel member of the Bcl-2 family that contains both BH2 and BH3 regions, but not BH1, BH4 or a C-terminal hydrophobic membrane anchor. Like Bcl-GL, Bfk does not bind to any Bcl-2 family members, even though its BH3 motif can mediate association with prosurvival proteins. Bfk localizes to cytoplasm, but unlike Bcl-GL, Bfk does not associate with organelles. Existing as four alternatively spliced isoforms, the pro-apoptotic isoforms of Bfk may help to protect against the development of human gastrointestinal malignancy. Bfk is found at low levels in stomach, ovary, bone marrow and spleen, but Bfk is highly expressed in mammary gland during pregnancy, suggesting that Bfk may play a role in mammary development. Bfk appears to be a cytosolic protein whose gene maps to chromosome 1p13.2. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome.

REFERENCES

1. Strausberg, R.L., et al. 2002. Generation and initial analysis of more than 15,000 full-length human and mouse cDNA sequences. Proc. Natl. Acad. Sci. USA 99: 16899-16903.
2. Coultas, L., et al. 2003. Bfk: a novel weakly proapoptotic member of the Bcl-2 protein family with a BH3 and a BH2 region. Cell Death Differ. 10: 185-192.
3. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. Cytogenet. Genome Res. 108: 217-222.
4. Dempsey, C.E., et al. 2005. Expression of pro-apoptotic Bfk isoforms reduces during malignant transformation in the human gastrointestinal tract. FEBS Lett. 579: 3646-3650.
5. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
6. Pujianto, D.A., et al. 2007. Bfk, a novel member of the bcl2 gene family, is highly expressed in principal cells of the mouse epididymis and demonstrates a predominant nuclear localization. Endocrinology 148: 3196-3204.
7. SWISS-PROT/TrEMBL (Q5TBC7). World Wide Web URL: http://www.uniprot.org/uniprot/Q5TBC7

CHROMOSOMAL LOCATION

Genetic locus: BCL2L15 (human) mapping to 1p13.2.

PRODUCT

Bfk siRNA (h) 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Bfk shRNA Plasmid (h): sc-88409-SH and Bfk shRNA (h) Lentiviral Particles: sc-88409-V as alternate gene silencing products.

For independent verification of Bfk (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88409A, sc-88409B and sc-88409C.

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

Bfk siRNA (h) is recommended for the inhibition of Bfk expression in human 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Bfk gene expression knockdown using RT-PCR Primer: Bfk (h)-PR: sc-88409-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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