SANTA CRUZ BIOTECHNOLOGY, INC.

BFP siRNA (m): sc-72648

BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. BFP (brain finger protein), also known as RNF112 (RING finger protein 112) or ZNF179 (zinc finger protein 179), is a 632 amino acid protein that is expressed predominately in brain where it may be involved in protein degradation pathways, as well as in the development of P19 embryonic carcinoma. The gene encoding BFP maps within a region of human chromosome 17p11.2 that is associated with Smith-Magenis syndrome (SMS), suggesting a role for BFP in the pathogenesis of SMS.

REFERENCES

1. Borden, K.L., et al. 1996. The RING finger domain: a recent example of a sequence-structure family. Curr. Opin. Struct. Biol. 6: 395-401.
2. Matsuda, Y., et al. 1996. Chromosome mapping of human (ZNF179), mouse, and rat genes for brain finger protein (BFP), a member of the RING finger family. Genomics 33: 325-327.
3. Kimura, T., et al. 1997. The brain finger protein gene (ZNF179), a member of the RING finger family, maps within the Smith-Magenis syndrome region at 17p11.2. Am. J. Med. Genet. 69: 320-324.
4. Orimo, A., et al. 1998. Molecular cloning, localization, and developmental expression of mouse brain finger protein (BFP)/ZNF179: distribution of BFP mRNA partially coincides with the affected areas of Smith-Magenis syndrome. Genomics 54: 59-69.
5. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 601237. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Seki, N., et al. 1999. cDNA cloning of a human brain finger protein, BFP/ZNF179, a member of the RING finger protein family. DNA Res. 6: 353-356.

CHROMOSOMAL LOCATION

Genetic locus: Rnf112 (mouse) mapping to 11 B2.

PRODUCT

BFP 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see BFP shRNA Plasmid (m): sc-72648-SH and BFP shRNA (m) Lentiviral Particles: sc-72648-V as alternate gene silencing products.

For independent verification of BFP (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-72648A, sc-72648B and sc-72648C.

PROTOCOLS

See our web site at 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 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

BFP siRNA (m) is recommended for the inhibition of BFP 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor BFP gene expression knockdown using RT-PCR Primer: BFP (m)-PR: sc-72648-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.