SANTA CRUZ BIOTECHNOLOGY, INC.

BEND6 siRNA (h): sc-95107

BACKGROUND

BEND6 (BEN domain-containing protein 6) is a 279 amino acid protein that contains a BEN domain. BEND6 exists as four alternatively spliced isoforms and is considered a complete proteome. BEN domain mediates protein-DNA and protein-protein interactions during chromatin organization and transcription. BEN domain may play a role in organization of viral DNA during replication or transcription. The BEND6 gene maps to chromosome 6p12.1. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Porphyria cutanea tarda is associated with chromosome 6 through the HFE gene which, when mutated, predisposes an individual to developing this porphyria. Notably, the PARK2 gene, which is associated with Parkinson's disease, and the genes encoding the major histocompatiblity complex proteins, which are key molecular components of the immune system and determine predisposition to rheumatic diseases, are also located on chromosome 6.

REFERENCES

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2. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
3. Safadi, S.S., et al. 2007. A disease state mutation unfolds the parkin ubiquitin-like domain. Biochemistry 46: 14162-14169.
4. Park, E., et al. 2007. Modulation of parkin gene expression in noradrenergic neuronal cells. Int. J. Dev. Neurosci. 25: 491-497.
5. Abhiman, S., et al. 2008. BEN: a novel domain in chromatin factors and DNA viral proteins. Bioinformatics 24: 458-461.
6. de Souza, R.F., et al. 2010. Diversity and evolution of chromatin proteins encoded by DNA viruses. Biochim. Biophys. Acta 1799: 302-318.
7. Malonia, S.K., et al. 2010. Gene regulation by SMAR1: role in cellular homeostasis and cancer. Biochim. Biophys. Acta 1815: 1-12.
8. SWISS-PROT/TrEMBL (Q5SZJ8). World Wide Web URL: http://www.uniprot.org/uniprot/Q5SZJ8

CHROMOSOMAL LOCATION

Genetic locus: BEND6 (human) mapping to 6p12.1.

PRODUCT

BEND6 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 BEND6 shRNA Plasmid (h): sc-95107-SH and BEND6 shRNA (h) Lentiviral Particles: sc-95107-V as alternate gene silencing products.

For independent verification of BEND6 (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-95107A, sc-95107B and sc-95107C.

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

BEND6 siRNA (h) is recommended for the inhibition of BEND6 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 BEND6 gene expression knockdown using RT-PCR Primer: BEND6 (h)-PR: sc-95107-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.