SANTA CRUZ BIOTECHNOLOGY, INC.

BEND5 siRNA (m): sc-108677

BACKGROUND

BEND5 (BEN domain-containing protein 5) is a 421 amino acid protein that contains a BEN domain. BEND5 exists as two alternatively spiced 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 BEND5 gene maps to chromosome 1p33. Chromosome 1 is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. The MUTYH gene is located on chromosome 1 and is partially responsible for familial adenomatous polyposis. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Watson, M.L., et al. 1990. Genomic organization of the selectin family of leukocyte adhesion molecules on human and mouse chromosome 1. J. Exp. Med. 172: 263-272.
2. Smith, J.R., et al. 1996. Major susceptibility locus for prostate cancer on chromosome 1 suggested by a genome-wide search. Science 274: 1371-1374.
3. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. Anticancer Res. 26: 953-959.
4. Gregory, S.G., et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
5. Abhiman, S., et al. 2008. BEN: a novel domain in chromatin factors and DNA viral proteins. Bioinformatics 24: 458-461.
6. Shih, I.M., et al. 2009. Pathogenesis of ovarian cancer: clues from selected overexpressed genes. Future Oncol. 5: 1641-1657.

CHROMOSOMAL LOCATION

Genetic locus: Bend5 (mouse) mapping to 4 D1.

PRODUCT

BEND5 siRNA (m) is a pool of 2 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 BEND5 shRNA Plasmid (m): sc-108677-SH and BEND5 shRNA (m) Lentiviral Particles: sc-108677-V as alternate gene silencing products.

For independent verification of BEND5 (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-108677A and sc-108677B.

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

BEND5 siRNA (m) is recommended for the inhibition of BEND5 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 BEND5 gene expression knockdown using RT-PCR Primer: BEND5 (m)-PR: sc-108677-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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