SANTA CRUZ BIOTECHNOLOGY, INC.

PSPBP siRNA (h): sc-95592

BACKGROUND

PSPBP (PSP94-binding protein), also known as PI16 (peptidase inhibitor 16), CRISP9 (cysteine-rich secretory protein 9) or MSMBBP, is a 463 amino acid single-pass type I membrane protein that is thought to function as a serine protease inhibitor and belongs to the CRISP family. Expressed in testis, prostate, intestine and ovary, PSPBP has been observed to concentrate in the sera of patients with prostate cancer, and is thereby a potential marker for prostate cancer following prostatectomy. Existing as two alternatively spliced isoforms, PSPBP is encoded by a gene that maps to human chromosome 6p21.2. Chromosome 6 contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, Porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. Hum. Mol. Genet. 3: 1561-1564.
2. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. Proc. Natl. Acad. Sci. USA 100: 5956-5961.
3. Reeves, J.R., et al. 2005. Identification, purification and characterization of a novel human blood protein with binding affinity for prostate secretory protein of 94 amino acids. Biochem. J. 385: 105-114.
4. Reeves, J.R., et al. 2006. Prognostic value of prostate secretory protein of 94 amino acids and its binding protein after radical prostatectomy. Clin. Cancer Res. 12: 6018-6022.
5. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. Genes Chromosomes Cancer 47: 159-164.
6. Fan, J., et al. 2010. Linkage disequilibrium mapping of the chromosome 6q21-22.31 bipolar I disorder susceptibility locus. Am. J. Med. Genet. B Neuropsychiatr. Genet. 153B: 29-37.

CHROMOSOMAL LOCATION

Genetic locus: PI16 (human) mapping to 6p21.2.

PRODUCT

PSPBP 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 PSPBP shRNA Plasmid (h): sc-95592-SH and PSPBP shRNA (h) Lentiviral Particles: sc-95592-V as alternate gene silencing products.

For independent verification of PSPBP (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-95592A, sc-95592B and sc-95592C.

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

PSPBP siRNA (h) is recommended for the inhibition of PSPBP 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 PSPBP gene expression knockdown using RT-PCR Primer: PSPBP (h)-PR: sc-95592-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.