SANTA CRUZ BIOTECHNOLOGY, INC.

BBS9 siRNA (h): sc-72622

BACKGROUND

BBS9 (Bardet-Biedl syndrome 9), also known as B1, D1, C18 or PTHB1, is an 887 amino acid protein that localizes to both the cytoplasm and the centrosome and exists as six alternatively spliced isoforms. Expressed in a wide variety of tissues, including liver, lung, heart, brain and skeletal muscle, BBS9 functions as a component of the multi-protein BBSome complex which is required for ciliogenesis and is regulated by GDP/GTP exchange factors. Defects in the gene encoding BBS9 are associated with the pathogenesis of Bardet-Biedl syndrome type 9 (BBS9), an autosomal recessive disorder that is characterized by severe pigmentary retinopathy, early onset obesity, polydactyly, hypogenitalism, renal malformation and mental retardation. Additionally, chromosomal aberrations involving the BBS9 gene may play a role in the formation of Wilms tumor 5 (WT5).

REFERENCES

1. Adams, A.E., et al. 1999. Identification of a novel parathyroid hormone-responsive gene in human osteoblastic cells. Bone 24: 305-313.
2. Vernon, E.G., et al. 2003. The parathyroid hormone-responsive B1 gene is interrupted by a t(1;7)(q42;p15) breakpoint associated with Wilms' tumour. Oncogene 22: 1371-1380.
3. Nishimura, D.Y., et al. 2005. Comparative genomics and gene expression analysis identifies BBS9, a new Bardet-Biedl syndrome gene. Am. J. Hum. Genet. 77: 1021-1033.
4. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 607968. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Nachury, M.V., et al. 2007. A core complex of BBS proteins cooperates with the GTPase Rab 8 to promote ciliary membrane biogenesis. Cell 129: 1201-1213.
6. Forti, E., et al. 2007. Temporal expression pattern of Bardet-Biedl syndrome genes in adipogenesis. Int. J. Biochem. Cell Biol. 39: 1055-1062.

CHROMOSOMAL LOCATION

Genetic locus: BBS9 (human) mapping to 7p14.3.

PRODUCT

BBS9 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 BBS9 shRNA Plasmid (h): sc-72622-SH and BBS9 shRNA (h) Lentiviral Particles: sc-72622-V as alternate gene silencing products.

For independent verification of BBS9 (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-72622A, sc-72622B and sc-72622C.

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

BBS9 siRNA (h) is recommended for the inhibition of BBS9 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 BBS9 gene expression knockdown using RT-PCR Primer: BBS9 (h)-PR: sc-72622-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.