SANTA CRUZ BIOTECHNOLOGY, INC.

BBS12 siRNA (m): sc-141483

BACKGROUND

BBS12 (Bardet-Biedl syndrome 12), also known as C4orf24, is a 710 amino acid protein that belongs to the TCP-1 chaperonin family. Defects in the gene encoding BBS12 are the cause of Bardet-Biedl syndrome type 12 (BBS12), genetically heterogeneous, autosomal recessive disorder characterized by early onset obesity, diabetes mellitus, hypertension and congenital heart disease. The gene encoding BBS12 maps to human chromosome 4q27, which encodes nearly 6% of the human genome and has the largest gene deserts (regions of the genome with no protein encoding genes) of all of the human chromosomes. Defects in some of the genes located on chromosome 4 are associated with Huntington's disease, Ellis-van Creveld syndrome, methylmalonic acidemia and polycystic kidney disease.

REFERENCES

1. Stoetzel, C., et al. 2007. Identification of a novel BBS gene (BBS12) highlights the major role of a vertebrate-specific branch of chaperonin-related proteins in Bardet-Biedl syndrome. Am. J. Hum. Genet. 80: 1-11.
2. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 610683. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Rooryck, C. and Lacombe, D. 2008. Bardet-Biedl syndrome. Ann. Endocrinol. 69: 463-471.
4. Oeffner, F., et al. 2008. Novel interaction partners of Bardet-Biedl syndrome proteins. Cell Motil. Cytoskeleton 65: 143-155.
5. Karaman, A. 2008. Bardet-Biedl syndrome: a case report. Dermatol. Online J. 14: 9.
6. Marion, V., et al. 2009. Transient ciliogenesis involving Bardet-Biedl syndrome proteins is a fundamental characteristic of adipogenic differentiation. Proc. Natl. Acad. Sci. USA 106: 1820-1825.

CHROMSOMAL LOCATION

Genetic locus: Bbs12 (mouse) mapping to 3 B.

PRODUCT

BBS12 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 BBS12 shRNA Plasmid (m): sc-141483-SH and BBS12 shRNA (m) Lentiviral Particles: sc-141483-V as alternate gene silencing products.

For independent verification of BBS12 (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-141483A, sc-141483B and sc-141483C.

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

BBS12 siRNA (m) is recommended for the inhibition of BBS12 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 BBS12 gene expression knockdown using RT-PCR Primer: BBS12 (m)-PR: sc-141483-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.