SANTA CRUZ BIOTECHNOLOGY, INC.

BLOS3 siRNA (m): sc-141713

BACKGROUND

BLOS3, also known as BLOC1S3 (biogenesis of lysosome-related organelles complex 1 subunit 3), is a 202 amino acid protein that belongs to the BLOC1S3 family. BLOS3, along with BLOS1 and BLOS2, are subunits of biogenesis of lysosome-related organelles complex-1 (BLOC1). Localizing to cytoplasm, BLOS3 plays a role in intracellular vesicle trafficking and is required for normal biogenesis of specialized organelles of the endosomal-lysosomal system, such as melanosomes and platelet dense granules. Defects in BLOS3 are the cause of Hermansky-Pudlak syndrome type 8 (HPS8). Hermansky-Pudlak syndrome (HPS) is a genetically heterogeneous and rare autosomal recessive disorder characterized by oculocutaneous albinism, bleeding due to platelet storage pool deficiency and lysosomal storage defects. This syndrome results from defects of diverse cytoplasmic organelles, including melanosomes, platelet dense granules and lysosomes. The BLOS3 gene maps to chromosome 19q13.32.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609762. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Morgan, N.V., et al. 2006. A germline mutation in BLOC1S3/reduced pigmentation causes a novel variant of Hermansky-Pudlak syndrome (HPS8). Am. J. Hum. Genet. 78: 160-166.
4. Nazarian, R., et al. 2006. Reinvestigation of the dysbindin subunit of BLOC-1 (biogenesis of lysosome-related organelles complex-1) as a dystrobrevin-binding protein. Biochem. J. 395: 587-598.
5. Di Pietro, S.M., et al. 2006. BLOC-1 interacts with BLOC-2 and the AP-3 complex to facilitate protein trafficking on endosomes. Mol. Biol. Cell 17: 4027-4038.
6. Setty, S.R., et al. 2007. BLOC-1 is required for cargo-specific sorting from vacuolar early endosomes toward lysosome-related organelles. Mol. Biol. Cell 18: 768-780.

CHROMOSOMAL LOCATION

Genetic locus: Bloc1s3 (mouse) mapping to 7 A3.

PRODUCT

BLOS3 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 BLOS3 shRNA Plasmid (m): sc-141713-SH and BLOS3 shRNA (m) Lentiviral Particles: sc-141713-V as alternate gene silencing products.

For independent verification of BLOS3 (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-141713A, sc-141713B and sc-141713C.

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

BLOS3 siRNA (m) is recommended for the inhibition of BLOS3 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 BLOS3 gene expression knockdown using RT-PCR Primer: BLOS3 (m)-PR: sc-141713-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.