SANTA CRUZ BIOTECHNOLOGY, INC.

Cappuccino siRNA (h): sc-60324

BACKGROUND

Biogenesis of lysosome-related organelles complex-1 (BLOC-1) is a multisubunit protein necessary for biogenesis of specialized organelles of the endosomal-lysosomal system (such as melanosomes and platelet-dense granules). The complex consists of coiled-coil-forming proteins Snapin, Pallidin, Cappuccino, Muted, BLOS1, BLOS2, and BLOS3. The localization of these proteins varies as they can be cytoplasmic, peripheral membrane bound or anchored to the vesicular membrane.Cappuccino, a primarily cytoplasmic protein, plays a role in the development of melanosomes, platelet-dense granules and other lysosome-related organelles. It interacts primarily with pallidin and Muted and has been implicated as an Actin-nucleation factor that may play a role in crosstalk between microfilaments and microtubules.

REFERENCES

1. Li, W., et al. 2003. Hermansky-Pudlak syndrome type 7 (HPS-7) results from mutant dysbindin, a member of the biogenesis of lysosome-related organelles complex 1 (BLOC-1). Nat. Genet. 35: 84-89.
2. Ciciotte, S.L., et al. 2003. Cappuccino, a mouse model of Hermansky-Pudlak syndrome, encodes a novel protein that is part of the Pallidin-muted complex (BLOC-1). Blood 101: 4402-4407.
3. Gwynn, B., et al. 2004. Reduced pigmentation (rp), a mouse model of Hermansky-Pudlak syndrome, encodes a novel component of the BLOC-1 complex. Blood 104: 3181-3189.
4. Bossi, G., et al. 2005. Normal lytic granule secretion by cytotoxic T lymphocytes deficient in BLOC-1, -2 and -3 and Myosins Va, VIIa and XV. Traffic 6: 243-251.
5. Quinlan, M.E., et al. 2005. *Drosophila* Spire is an Actin nucleation factor. Nature 433: 382-388.
6. Rosales-Nieves, A.E., et al. 2006. Coordination of microtubule and microfilament dynamics by *Drosophila* Rho1, Spire and Cappuccino. Nat. Cell Biol. 8: 367-376.

CHROMOSOMAL LOCATION

Genetic locus: BLOC1S4 (human) mapping to 4p16.1.

PRODUCT

Cappuccino 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 Cappuccino shRNA Plasmid (h): sc-60324-SH and Cappuccino shRNA (h) Lentiviral Particles: sc-60324-V as alternate gene silencing products.

For independent verification of Cappuccino (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-60324A, sc-60324B and sc-60324C.

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

Cappuccino siRNA (h) is recommended for the inhibition of Cappuccino 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 Cappuccino gene expression knockdown using RT-PCR Primer: Cappuccino (h)-PR: sc-60324-PR (20 µl, 401 bp). 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.