

Pallidin siRNA (h): sc-45204

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. Pallidin, also designated Syntaxin 13-interacting protein, is widely expressed and can also exist as a soluble protein. Pallidin protein is significant in the development of lysosome-related organelles, such as melanosomes and platelet-dense granules. Pallidin is also implicated in intracellular vesicle trafficking as it pertains to vesicle-docking and fusion.

REFERENCES

1. Huang, L., et al. 1999. The pallid gene encodes a novel, Syntaxin 13-interacting protein involved in platelet storage pool deficiency. *Nat. Genet.* 23: 329-332.
2. Falcon-Perez, J.M. 2002. The Pallidin (Pldn) gene and the role of SNARE proteins in melanosome biogenesis. *Pigment Cell Res.* 15: 82-86.
3. Moriyama, K., et al. 2002. Pallidin is a component of a multi-protein complex involved in the biogenesis of lysosome-related organelles. *Traffic* 3: 666-677.
4. Falcon-Perez, J.M., et al. 2002. BLOC-1, a novel complex containing the Pallidin and Muted proteins involved in the biogenesis of melanosomes and platelet-dense granules. *J. Biol. Chem.* 277: 28191-28199.

CHROMOSOMAL LOCATION

Genetic locus: BLOC1S6 (human) mapping to 15q21.1.

PRODUCT

Pallidin 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Pallidin shRNA Plasmid (h): sc-45204-SH and Pallidin shRNA (h) Lentiviral Particles: sc-45204-V as alternate gene silencing products.

For independent verification of Pallidin (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-45204A, sc-45204B and sc-45204C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Pallidin siRNA (h) is recommended for the inhibition of Pallidin 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 μ M in 66 μ l. 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.

GENE EXPRESSION MONITORING

Pallidin (A-11): sc-515608 is recommended as a control antibody for monitoring of Pallidin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor Pallidin gene expression knockdown using RT-PCR Primer: Pallidin (h)-PR: sc-45204-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Mao, G.F., et al. 2017. Dysregulation of PLDN (pallidin) is a mechanism for platelet dense granule deficiency in RUNX1 haploinsufficiency. *J. Thromb. Haemost.* 15: 792-801.

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.