



AP1S1 siRNA (m): sc-60183

BACKGROUND

Adaptins are heterotetrameric subunits of adaptors, which are complexes involved in the formation of Clathrin-coated pits for vesicle-mediated endocytosis. Clathrin and its associated heterotetrameric protein complexes make up the main protein components of the coat surrounding the cytoplasmic face of coated vesicles. The Adaptin family, comprising α , β , β' and γ classes, is also responsible for the transport of ligand-receptor complexes from plasma membranes and the *trans*-Golgi network to lysosomes. Two main types of adaptor proteins (APs), AP-1 and AP-2, are found in Clathrin-coated structures located at the Golgi complex and the plasma membrane of mammalian cells, respectively. AP-1 contains bound casein kinase-2 that phosphorylates GGA1 and GGA3 (ADP factor-binding proteins) and causes autoinhibition. AP1S1 refers to the $\alpha 1$ subunit of an AP. The AP1S1 gene is one of the 37 genes required for cell division.

REFERENCES

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2. Shim, J., Sternberg, P.W. and Lee, J. 2000. Distinct and redundant functions of $\mu 1$ medium chains of the AP-1 Clathrin-associated protein complex in the nematode *Caenorhabditis elegans*. *Mol. Biol. Cell* 11: 2743-2756.
3. Takatsu, H., Futatsumori, M., Yoshino, K., Yoshida, Y., Shin, H.W. and Nakayama, K. 2001. Similar subunit interactions contribute to assembly of Clathrin adaptor complexes and COPI complex: analysis using yeast three-hybrid system. *Biochem. Biophys. Res. Commun.* 284: 1083-1089.
4. Doray, B., Ghosh, P., Griffith, J., Geuze, H.J. and Kornfeld, S. 2002. Cooperation of GGAs and AP-1 in packaging MPRs at the *trans*-Golgi network. *Science* 297: 1700-1703.
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CHROMOSOMAL LOCATION

Genetic locus: Ap1s1 (mouse) mapping to 5 G2.

PRODUCT

AP1S1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see AP1S1 shRNA Plasmid (m): sc-60183-SH and AP1S1 shRNA (m) Lentiviral Particles: sc-60183-V as alternate gene silencing products.

For independent verification of AP1S1 (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-60183A, sc-60183B and sc-60183C.

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 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

AP1S1 siRNA (m) is recommended for the inhibition of AP1S1 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 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor AP1S1 gene expression knockdown using RT-PCR Primer: AP1S1 (m)-PR: sc-60183-PR (20 μ l). 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.