

AI-BP siRNA (m): sc-140920

BACKGROUND

Apolipoproteins are protein components of plasma lipoproteins. Apolipoprotein A-I (apoA-I) promotes cholesterol efflux from tissues to the liver for excretion. apoA-I is the major protein component of high density lipoprotein (HDL) in the plasma. It can function as a cofactor for lecithin cholesterolacyl-transferase, which is responsible for the formation of most plasma cholesteryl esters. AI-BP (apolipoprotein A-I-binding protein), also known as YjeF N-terminal domain-containing protein 1, is a 288 amino acid secreted protein that binds apoA-I, apoA2 and HDL. Individuals with impaired renal function show an increased rate of AI-BP excretion, indicating that it is normally reabsorbed within the kidney tubules. AI-BP belongs to the YjeF N-terminal domain protein family, which includes proteins that are frequently involved in oogenesis and spermatogenesis. There are two isoforms of AI-BP that are produced as a result of alternative splicing events.

REFERENCES

1. Keso, L., et al. 1987. Apolipoprotein A-I-binding protein from human term placenta. Purification and partial characterization. *FEBS Lett.* 215: 105-108.
2. Sviridov, D.D., et al. 1992. Studies on the proteins involved in the interaction of high-density lipoprotein with isolated human small intestine epithelial cells. *FEBS Lett.* 303: 202-204.
3. Jin, F.Y., et al. 1998. Estradiol stimulates apolipoprotein A-I- but not A-II-containing particle synthesis and secretion by stimulating mRNA transcription rate in Hep G2 cells. *Arterioscler. Thromb. Vasc. Biol.* 18: 999-1006.
4. Ritter, M., et al. 2002. Cloning and characterization of a novel apolipoprotein A-I binding protein, AI-BP, secreted by cells of the kidney proximal tubules in response to HDL or apoA-I. *Genomics* 79: 693-702.

CHROMOSOMAL LOCATION

Genetic locus: ApoA1bp (mouse) mapping to 3 F1.

PRODUCT

AI-BP siRNA (m) is a pool of 2 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 AI-BP shRNA Plasmid (m): sc-140920-SH and AI-BP shRNA (m) Lentiviral Particles: sc-140920-V as alternate gene silencing products.

For independent verification of AI-BP (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-140920A and sc-140920B.

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

AI-BP siRNA (m) is recommended for the inhibition of AI-BP 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.

GENE EXPRESSION MONITORING

AI-BP (D-3): sc-393532 is recommended as a control antibody for monitoring of AI-BP 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 AI-BP gene expression knockdown using RT-PCR Primer: AI-BP (m)-PR: sc-140920-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.