SANTA CRUZ BIOTECHNOLOGY, INC.

AI-BP siRNA (h): sc-88158

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 cholesterolacyltransferase, 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 (human) mapping to 1q23.1.

PRODUCT

AI-BP 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 AI-BP shRNA Plasmid (h): sc-88158-SH and AI-BP shRNA (h) Lentiviral Particles: sc-88158-V as alternate gene silencing products.

For independent verification of AI-BP (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-88158A, sc-88158B and sc-88158C.

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.

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

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

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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 (h)-PR: sc-88158-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.