SANTA CRUZ BIOTECHNOLOGY, INC.

apoL3 siRNA (h): sc-60193

BACKGROUND

Apolipoproteins are protein components of plasma lipoproteins. The apolipoprotein L gene family encodes six highly homologous proteins designated apoL 1 to 6, which are associated with large high density type lipoproteins (HDL). The human apoL family maps to chromosome 22q12.3 within a 127,000-bp region. apoL2 and apoL3 may allow the binding of lipids to organelles or may be involved in the movement of lipids in the cytoplasm. apoL2 localizes to the cytoplasm and is widely expressed, with the highest levels observed in the lung, thymus, pancreas, placenta, adult brain and prostate. The apoL2 protein is also detected in the spleen, liver, kidney, colon, small intestine, uterus, spinal cord, adrenal gland, salivary gland, trachea, mammary gland, skeletal muscle, testis and fetal brain and liver. apoL3 also localizes to the cytoplasm and is widely expressed, with highest levels detected in the prostate, lung and placenta. It is also detected in kidney, bone marrow, spleen, thymus, spinal cord, adrenal gland, salivary gland, trachea and mammary gland. Lower levels of apoL3 are observed in the brain, heart, fetal liver, pancreas and testis.

REFERENCES

1. Horrevoets, A.J., et al. 1999. Vascular endothelial genes that are responsive to tumor necrosis factor a *in vitro* are expressed in atherosclerotic lesions, including inhibitor of apoptosis protein-1, Stannin, and two novel genes. Blood 93: 3418-3431.
2. Duchateau, P.N., et al. 2001. Apolipoprotein L gene family: tissue-specific expression, splicing, promoter regions; discovery of a new gene. J. Lipid Res. 42: 620-630.
3. Page, N.M., et al. 2001. The human apolipoprotein L gene cluster: identification, classification, and sites of distribution. Genomics 74: 71-78.
4. Collins, J.E., et al. 2004. A genome annotation-driven approach to cloning the human ORFeome. Genome Biol. 5: R84.
5. Panáková, D., et al. 2005. Lipo-protein particles are required for hedgehog and Wingless signalling. Nature 435: 58-65.

CHROMOSOMAL LOCATION

Genetic locus: APOL3 (human) mapping to 22q12.3.

PRODUCT

apoL3 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 apoL3 shRNA Plasmid (h): sc-60193-SH and apoL3 shRNA (h) Lentiviral Particles: sc-60193-V as alternate gene silencing products.

For independent verification of apoL3 (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-60193A, sc-60193B and sc-60193C.

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

apoL3 siRNA (h) is recommended for the inhibition of apoL3 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

apoL3 (L07): sc-101262 is recommended as a control antibody for monitoring of apoL3 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 apoL3 gene expression knockdown using RT-PCR Primer: apoL3 (h)-PR: sc-60193-PR (20 µl). 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.