SANTA CRUZ BIOTECHNOLOGY, INC.

apoAL siRNA (h): sc-95593

BACKGROUND

ApoAL (apolipoprotein(a)-like protein 2), also known as LPAL2 (lipoprotein, Lp(a)-like 2, pseudogene), APOA2 (putative apolipoprotein(a)-like protein 2) or APOARGC (apolipoprotein a-related gene C protein), is a 132 amino acid protein that contains an N-terminal secretion signal followed by one kringle domain. Encoded by a gene that maps to human chromosome 6q25.3, apoAL is expressed in liver. Resembling apoA-I, apoAL exhibits a highly similar signal sequence and kringle domain; however, apoAL is noticeably shorter and does not contain a peptidase region. Transcripts of apoAL consist of truncated open reading frames and are candidates for nonsense-mediated decay, further implicating apoAL as a pseudogene. A gene cluster that includes apoAL is a potential risk locus for coronary artery disease. ApoAL may also be linked to increased risk of atherosclerosis.

REFERENCES

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3. Bergman, A., et al. 2007. Buffering mechanisms in aging: a systems approach toward uncovering the genetic component of aging. PLoS Comput. Biol. 3: e170.
4. Clarke, R., et al. 2009. Genetic variants associated with Lp(a) lipoprotein level and coronary disease. N. Engl. J. Med. 361: 2518-2528.
5. Arking, D.E., et al. 2009. Understanding cardiovascular disease through the lens of genome-wide association studies. Trends Genet. 25: 387-394.
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7. Mälarstig, A., et al. 2010. Genetics of atherothrombosis and thrombophilia. Curr. Atheroscler. Rep. 12: 159-166.
8. Roberts, R., et al. 2010. The genome-wide association study—a new era for common polygenic disorders. J. Cardiovasc. Transl. Res. 3: 173-182.

CHROMOSOMAL LOCATION

Genetic locus: LPAL2 (human) mapping to 6q25.3.

PRODUCT

apoAL 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 apoAL shRNA Plasmid (h): sc-95593-SH and apoAL shRNA (h) Lentiviral Particles: sc-95593-V as alternate gene silencing products.

For independent verification of apoAL (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-95593A, sc-95593B and sc-95593C.

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

apoAL siRNA (h) is recommended for the inhibition of apoAL 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor apoAL gene expression knockdown using RT-PCR Primer: apoAL (h)-PR: sc-95593-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.

PROTOCOLS

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