



## apoL-IV siRNA (h): sc-72520

### BACKGROUND

The apolipoprotein L gene family maps to a region on chromosome 22 and encodes six highly homologous proteins designated apoL-I, apoL-II, apoL-III, apoL-IV, apoL-V and apoL-VI, all of which function as components of plasma lipoproteins. ApoL-IV (apolipoprotein L-IV), also known as APOL4, is a 351 amino acid protein that exists as multiple alternatively spliced isoforms, one of which is secreted. Expressed in spleen, placenta, spinal cord, uterus, testis and trachea, apoL-IV is thought to play a role in lipid exchange and transport throughout the body and may be involved in reverse cholesterol transport, specifically from peripheral cells to the liver. Overexpression of apoL-IV is associated with schizophrenia, suggesting that apoL-IV may play a role in the pathogenesis of neural disorders.

### REFERENCES

1. Page, N.M., et al. 2001. The human apolipoprotein L gene cluster: identification, classification, and sites of distribution. *Genomics* 74: 71-78.
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. Monajemi, H., et al. 2002. The apolipoprotein L gene cluster has emerged recently in evolution and is expressed in human vascular tissue. *Genomics* 79: 539-546.
4. Mimmack, M.L., et al. 2002. Gene expression analysis in schizophrenia: reproducible up-regulation of several members of the apolipoprotein L family located in a high-susceptibility locus for schizophrenia on chromosome 22. *Proc. Natl. Acad. Sci. USA* 99: 4680-4685.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607254. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. McGhee, K.A., et al. 2005. Investigation of the apolipoprotein-L (APOL) gene family and schizophrenia using a novel DNA pooling strategy for public database SNPs. *Schizophr. Res.* 76: 231-238.

### CHROMOSOMAL LOCATION

Genetic locus: APOL4 (human) mapping to 22q12.3.

### PRODUCT

apoL-IV 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see apoL-IV shRNA Plasmid (h): sc-72520-SH and apoL-IV shRNA (h) Lentiviral Particles: sc-72520-V as alternate gene silencing products.

For independent verification of apoL-IV (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-72520A, sc-72520B and sc-72520C.

### RESEARCH USE

For research use only, not for use in diagnostic procedures.

### 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

apoL-IV siRNA (h) is recommended for the inhibition of apoL-IV 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  $\mu$ M in 66  $\mu$ 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 apoL-IV gene expression knockdown using RT-PCR Primer: apoL-IV (h)-PR: sc-72520-PR (20  $\mu$ 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](http://www.scbt.com) for detailed protocols and support products.