



## SDPR siRNA (h): sc-94845

### BACKGROUND

SDPR (serum deprivation response protein), also known as SDR or PS-p68 (phosphatidylserine binding protein), is a member of the PTRF/SDPR family of proteins. Predominantly expressed in lung and heart with lower expression levels in pancreas, kidney, brain, skeletal muscle, placenta and liver, SDPR localizes to the cytoplasm and is a component of the caveolae (invagination of the plasma membrane). SDPR binds to phosphatidylserine in a calcium-independent manner and is the major phospholipid binding protein found in platelets. In addition, SDPR specifically binds to PKC  $\alpha$  and plays an important role in the targeting of PKC  $\alpha$  to the caveolae. Binding of SDPR to PKC  $\alpha$  results in phosphorylated SDPR. Expression of SDPR is upregulated during growth arrest in response to serum deprivation of non-transformed cells. In breast, prostate and kidney tumors, SDPR expression is downregulated and, because its expression is inhibited by c-Src, SDPR may serve as a useful tumor marker in metastatic cells using c-Src kinase activity as a means for growth.

### REFERENCES

1. Burgener, R., et al. 1990. Purification and characterization of a major phosphatidylserine-binding phosphoprotein from human platelets. *Biochem. J.* 269: 729-734.
2. Gustincich, S. and Schneider, C. 1993. Serum deprivation response gene is induced by serum starvation but not by contact inhibition. *Cell Growth Differ.* 4: 753-760.
3. Gustincich, S., et al. 1999. The human serum deprivation response gene (SDPR) maps to 2q32-q33 and codes for a phosphatidyl-serine-binding protein. *Genomics* 57: 120-129.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606728. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Ellermeier, C.D., et al. 2006. A three-protein signaling pathway governing immunity to a bacterial cannibalism toxin. *Cell* 124: 549-559.
6. Tenta, R., et al. 2007. Microarray analysis of survival pathways in human PC-3 prostate cancer cells. *Cancer Genomics Proteomics* 4: 309-318.

### CHROMOSOMAL LOCATION

Genetic locus: SDPR (human) mapping to 2q32.3.

### PRODUCT

SDPR 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 SDPR shRNA Plasmid (h): sc-94845-SH and SDPR shRNA (h) Lentiviral Particles: sc-94845-V as alternate gene silencing products.

For independent verification of SDPR (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-94845A, sc-94845B and sc-94845C.

### 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

SDPR siRNA (h) is recommended for the inhibition of SDPR 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 SDPR gene expression knockdown using RT-PCR Primer: SDPR (h)-PR: sc-94845-PR (20  $\mu$ l, 418 bp). 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](http://www.scbt.com) for detailed protocols and support products.