



SDPR (N-19): sc-162162

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 α and plays an important role in the targeting of PKC α to the caveolae. Binding of SDPR to PKC α 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

- Burgener, R., Wolf, M., Ganz, T. and Baggiolini, M. 1990. Purification and characterization of a major phosphatidylserine-binding phosphoprotein from human platelets. *Biochem. J.* 269: 729-734.
- 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.
- Gustincich, S., Vatta, P., Goruppi, S., Wolf, M., Saccone, S., Della Valle, G., Baggiolini, M. and Schneider, C. 1999. The human serum deprivation response gene (SDPR) maps to 2q32-q33 and codes for a phosphatidylserine-binding protein. *Genomics* 57: 120-129.
- 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/>
- Ellermeier, C.D., Hobbs, E.C., Gonzalez-Pastor, J.E. and Losick, R. 2006. A three-protein signaling pathway governing immunity to a bacterial cannibalism toxin. *Cell* 124: 549-559.
- Tenta, R., Katopodis, H., Chatziioannou, A., Pilalis, E., Calvo, E., Luu-The, V., Labrie, F., Kolisis, F. and Koutsilieris, M. 2007. Microarray analysis of survival pathways in human PC-3 prostate cancer cells. *Cancer Genomics Proteomics* 4: 309-318.
- Li, X., Jia, Z., Shen, Y., Ichikawa, H., Jarvik, J., Nagele, R.G. and Goldberg, G.S. 2008. Coordinate suppression of SDPR and Fhl1 expression in tumors of the breast, kidney, and prostate. *Cancer Sci.* E-published.
- Ogata, T., Ueyama, T., Isodono, K., Tagawa, M., Takehara, N., Kawashima, T., Harada, K., Takahashi, T., Shioi, T., Matsubara, H. and Oh, H. 2008. MURC, a muscle-restricted coiled-coil protein that modulates the Rho/ROCK pathway, induces cardiac dysfunction and conduction disturbance. *Mol. Cell. Biol.* E-published.

RESEARCH USE

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

CHROMOSOMAL LOCATION

Genetic locus: SDPR (human) mapping to 2q32.3; Sdpr (mouse) mapping to 1 C1.1.

SOURCE

SDPR (N-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of SDPR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-162162 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SDPR (N-19) is recommended for detection of SDPR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for SDPR siRNA (h): sc-94845, SDPR siRNA (m): sc-153288, SDPR shRNA Plasmid (h): sc-94845-SH, SDPR shRNA Plasmid (m): sc-153288-SH, SDPR shRNA (h) Lentiviral Particles: sc-94845-V and SDPR shRNA (m) Lentiviral Particles: sc-153288-V.

Molecular Weight of SDPR: 70 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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