

PLSCR3 (H-72): sc-135240

BACKGROUND

The calcium-dependent mitochondrial membrane protein PLSCR3 (phospholipid scramblase 3), also known as PLS3, is a member of the phospholipid scramblase (PLS) family. The PLS family consists of membrane-bound enzymes that participate in the bi-directional movement of phospholipids. PLSCR3 is expressed in a wide variety of tissues but is not found in brain, liver or testis. It is involved in the regulation of mitochondrial respiratory function, morphology and apoptotic responses. More specifically, PLSCR3 is responsible for mediating the transport of cardiolipin from the inner mitochondrial membrane to the outer mitochondrial membrane. Cardiolipin is a major polyglycerophospholipid that plays a role in the regulation of mitochondrial enzymes involved in the generation of ATP. PLSCR3 activity is activated/phosphorylated by PKC δ and PLSCR3 functions as a downstream effector in PKC δ -induced apoptosis.

REFERENCES

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3. Liu, J., Chen, J., Dai, Q. and Lee, R.M. 2003. Phospholipid scramblase 3 is the mitochondrial target of protein kinase C δ -induced apoptosis. *Cancer Res.* 63: 1153-1156.
4. Wiedmer, T., Zhao, J., Li, L., Zhou, Q., Hevener, A., Olefsky, J.M., Curtiss, L.K. and Sims, P.J. 2004. Adiposity, dyslipidemia, and Insulin resistance in mice with targeted deletion of phospholipid scramblase 3 (PLSCR3). *Proc. Natl. Acad. Sci. USA* 101: 13296-13301.
5. He, Y., Liu, J., Durrant, D., Yang, H.S., Sweatman, T., Lothstein, L. and Lee, R.M. 2005. N-benzyladriamycin-14-valerate (AD198) induces apoptosis through protein kinase C- δ -induced phosphorylation of phospholipid scramblase 3. *Cancer Res.* 65: 10016-10023.
6. Phillippe, M., Bradley, D.F., Ji, H., Oppenheimer, K.H. and Chien, E.K. 2006. Phospholipid scramblase isoform expression in pregnant rat uterus. *J. Soc. Gynecol. Investig.* 13: 497-501.

CHROMOSOMAL LOCATION

Genetic locus: PLSCR3 (human) mapping to 17p13.1; Plscr3 (mouse) mapping to 11 B3.

SOURCE

PLSCR3 (H-72) is a rabbit polyclonal antibody raised against amino acids 90-161 mapping within an internal region of PLSCR3 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.

APPLICATIONS

PLSCR3 (H-72) is recommended for detection of PLSCR3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

PLSCR3 (H-72) is also recommended for detection of PLSCR3 in additional species, including equine and bovine.

Suitable for use as control antibody for PLSCR3 siRNA (h): sc-62828, PLSCR3 siRNA (m): sc-62829, PLSCR3 shRNA Plasmid (h): sc-62828-SH, PLSCR3 shRNA Plasmid (m): sc-62829-SH, PLSCR3 shRNA (h) Lentiviral Particles: sc-62828-V and PLSCR3 shRNA (m) Lentiviral Particles: sc-62829-V.

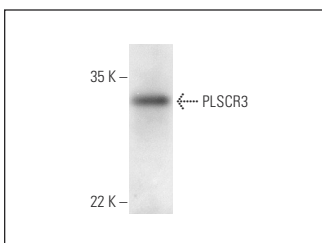
Molecular Weight of PLSCR3: 32 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, mouse lung extract: sc-2390 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz[™] Mounting Medium: sc-24941.

DATA



PLSCR3 (H-72): sc-135240. Western blot analysis of PLSCR3 expression in mouse lung tissue extract.

STORAGE

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

RESEARCH USE

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