

## PISD (C-12): sc-86196

### BACKGROUND

Enzymes known as phosphatidylserine decarboxylases (PSDs) catalyze the formation of phosphatidylethanolamine from phosphatidylserine via phosphatidylserine decarboxylation. Type I PSDs contain LGST motifs and are found in bacteria and eukaryotic mitochondria, whereas type II PSDs contain GGST motifs and are found in eukaryotic endomembrane systems. PISD (phosphatidylserine decarboxylase), also known as phosphatidylserine decarboxylase proenzyme, PSDC, PSD, PSSC, DJ858B16, dJ858B16.2 or DKFZp566G-2246, is a 408 amino acid type I phosphatidylserine decarboxylase that localizes to the inner mitochondrial membrane. PISD contains a conserved LGST motif which is cleaved to produce two isoforms known as PISD  $\alpha$  and PISD  $\beta$ . PISD is capable of forming a heterodimer and is highly expressed in liver and testis. The gene encoding PISD maps to human chromosome 22q12.2.

### REFERENCES

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2. Kuge, O., Saito, K., Kojima, M., Akamatsu, Y. and Nishijima, M. 1996. Post-translational processing of the phosphatidylserine decarboxylase gene product in Chinese hamster ovary cells. *Biochem. J.* 319: 33-38.
3. Steenbergen, R., Nanowski, T.S., Beigneux, A., Kulinski, A., Young, S.G. and Vance, J.E. 2005. Disruption of the phosphatidylserine decarboxylase gene in mice causes embryonic lethality and mitochondrial defects. *J. Biol. Chem.* 280: 40032-40040.
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5. Schuiki, I. and Daum, G. 2009. Phosphatidylserine decarboxylases, key enzymes of lipid metabolism. *IUBMB Life* 61: 151-162.
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### CHROMOSOMAL LOCATION

Genetic locus: PISD (human) mapping to 22q12.2; Pisd (mouse) mapping to 5 B1.

### SOURCE

PISD (C-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of PISD of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86196 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

PISD (C-12) is recommended for detection of PISD 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).

PISD (C-12) is also recommended for detection of PISD in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for PISD siRNA (h): sc-76147, PISD siRNA (m): sc-152277, PISD shRNA Plasmid (h): sc-76147-SH, PISD shRNA Plasmid (m): sc-152277-SH, PISD shRNA (h) Lentiviral Particles: sc-76147-V and PISD shRNA (m) Lentiviral Particles: sc-152277-V.

Molecular Weight of PISD isoform 1: 47 kDa.

Molecular Weight of PISD isoform 2: 43 kDa.

Positive Controls: JAR cell lysate: sc-2276.

### 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) 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.

### 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) or our catalog for detailed protocols and support products.



Try **PISD (H-2): sc-390070** or **PISD (D-9): sc-514884**, our highly recommended monoclonal alternatives to PISD (C-12).