

PISD (D-9): sc-514884

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 DKFZp566G2246, 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 α and PISD β . 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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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.

CHROMOSOMAL LOCATION

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

SOURCE

PISD (D-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 291-312 within an internal region of PISD of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-514884 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PISD (D-9) is recommended for detection of PISD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

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.

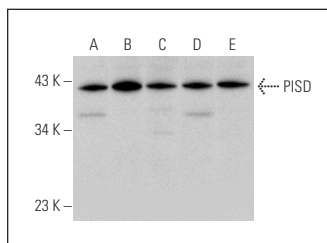
Molecular Weight of PISD isoform 2: 43 kDa.

Positive Controls: JAR cell lysate: sc-2276, Hep G2 cell lysate: sc-2227 or K-562 whole cell lysate: sc-2203.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



PISD (D-9): sc-514884. Western blot analysis of PISD expression in JAR (A), K-562 (B), Hep G2 (C), HeLa (D) and COLO 320DM (E) whole cell lysates.

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.

PROTOCOLS

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