SANTA CRUZ BIOTECHNOLOGY, INC.

GPI-PLD (E-5): sc-365873

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphatidylinositol-glycan-specific phospholipase D (GPI-PLD) is a high-density lipoprotein-associated protein found on chromosome 6p22 that specifically hydrolyzes the inositol phosphate linkage in proteins anchored by phosphatidylinositol-glycans (PI-Gs). GPI-PLD is found in serum, liver, cerebrospinal fluid and in milk. The majority of plasma GPI-PLD appears to be specifically associated with a small, discrete and minor fraction of lipoproteins containing apoA-I and apoA-IV. Serum GPI-PLD activity is reduced over 75% in systemic inflammatory response syndrome and the downregulation of GPI-PLD could play an important role in the control of proinflammatory responses.

REFERENCES

1. Scallon, B.J., et al. 1991. Primary structure and functional activity of a phosphatidylinositol-glycan-specific phospholipase D. Science 252: 446-448.
2. Stieger, S., et al. 1991. Enzymatic properties of phosphatidylinositol-glycan-specific phospholipase C from rat liver and phosphatidylinositol-glycan-specific phospholipase D from rat serum. Eur. J. Biochem. 197: 67-73.
3. Hoener, M.C., et al. 1992. Phosphatidylinositolglycan-specific phospholipase D is an amphiphilic glycoprotein that in serum is associated with high-density lipoproteins. Eur. J. Biochem. 206: 747-757.
4. Scallon, B.J., et al. 1992. A novel strategy for secreting proteins: use of phosphatidylinositol-glycan-specific phospholipase D to release chimeric phosphatidylinositol-glycan anchored proteins. Biotechnology 10: 550-556.
5. Deeg, M.A., et al. 2001. Increased expression of GPI-specific phospholipase D in mouse models of type 1 diabetes. Am. J. Physiol. Endocrinol. Metab. 281: E147-E154.
6. Deeg, M.A., et al. 2001. GPI-specific phospholipase D associates with an apoA-I- and apoA-IV-containing complex. J. Lipid Res. 42: 442-451.
7. Du, X., et al. 2001. Downregulation of glycosylphosphatidylinositol-specific phospholipase D induced by lipopolysaccharide and oxidative stress in the murine monocyte-macrophage cell line RAW 264.7. Infect. Immun. 69: 3214-3223.

CHROMOSOMAL LOCATION

Genetic locus: GPLD1 (human) mapping to 6p22.3; Gpld1 (mouse) mapping to 13 A3.1.

SOURCE

GPI-PLD (E-5) is a mouse monoclonal antibody raised against amino acids 1-300 of GPI-PLD of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

GPI-PLD (E-5) is recommended for detection of GPI-PLD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 GPI-PLD siRNA (h): sc-43811, GPI-PLD siRNA (m): sc-41625, GPI-PLD shRNA Plasmid (h): sc-43811-SH, GPI-PLD shRNA Plasmid (m): sc-41625-SH, GPI-PLD shRNA (h) Lentiviral Particles: sc-43811-V and GPI-PLD shRNA (m) Lentiviral Particles: sc-41625-V.

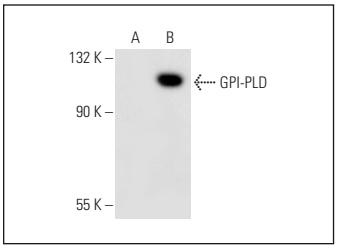
Molecular Weight of GPI-PLD: 110 kDa.

Positive Controls: GPI-PLD (m): 293T Lysate: sc-120582, Caki-1 cell lysate: sc-2224 or GPI-PLD (h): 293 Lysate: sc-159553.

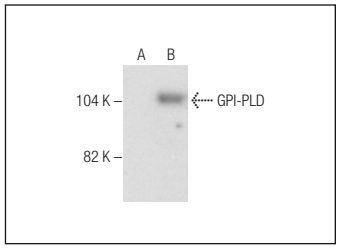
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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 A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



GPI-PLD (E-5): sc-365873. Western blot analysis of GPI-PLD expression in non-transfected: sc-117752 (**A**) and mouse GPI-PLD transfected: sc-120582 (**B**) 293T whole cell lysates.



GPI-PLD (E-5): sc-365873. Western blot analysis of GPI-PLD expression in non-transfected: sc-110760 (**A**) and human GPI-PLD transfected: sc-159553 (**B**) 293 whole cell lysates.

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.