SANTA CRUZ BIOTECHNOLOGY, INC.

Plb2 (yC-20): sc-21123

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The Power to Question

BACKGROUND

Several enzymes with lysophospholipase/phospholipase B (PLB) activity have been described from the budding yeast *Saccharomyces cerevisiae*. *In vitro*, these enzymes are capable of hydrolyzing all phospholipids that can be extracted from yeast cells. Lysophospholipase/PLB activity is secreted from yeast cells growing aerobically in batch cultures during the exponential phase. PLB1 and PLB2 are found in plasma membranes and PLB3 is found in culture supernatants and the periplasmic space. PLB1 and PLB2 have apparent molecular weights of 220 kda and 145 kda, respectively. The PLB enzymes are very similar with respect to their catalytic properties. PLB1 and PLB2 convert lysophosphatidylcholine to diacylphosphatidylcholine and unesterified fatty acids. *In vitro*, PLB3 hydrolyzes only phosphatidylinositol and phosphatidylserine and, to a lesser extent, their lyso-analogs. Unlike PLB1, PLB2 does not contain significant transacylase activity. The PLB2 gene product shows lysophospholipase activity toward lysophosphatidylcholine, lysophosphatidylserine, and lysophosphatidylethanolamine. PLB2 gene expression was found to be maximal during exponential growth conditions and was decreased in late phase, in a manner similar to other genes involved in phospholipid metabolism.

REFERENCES

1. Witt, W., Mertsching, A., and Konig, E. 1984. Secretion of phospholipase B from *Saccharomyces cerevisiae*. Biochim. Biophys. Acta 795: 117-124.
2. Witt, W., Schweingruber, M.E., and Mertsching, A. 1984. Phospholipase B from the plasma membrane of *Saccharomyces cerevisiae*. Separation of two forms with different carbohydrate content. Biochim. Biophys. Acta 795: 108-116.
3. Lee, K.S., Patton, J.L., Fido, M., Hines, L.K., Kohlwein, S.D., Paltauf, F., Henry, S.A., and Levin, D.E. 1994. The *Saccharomyces cerevisiae* PLB1 gene encodes a protein required for lysophospholipase and phospholipase B activity. J. Biol. Chem. 269: 19725-19730.
4. Merkel, O., Fido, M., Mayr, J.A., Pruger, H., Raab, F., Zandonella, G., Kohlwein, S.D., and Paltauf, F. 1999. Characterization and function *in vivo* of two novel phospholipases B/lysophospholipases from *Saccharomyces cerevisiae*. J. Biol. Chem. 274: 28121-28127.
5. Fyrst, H., Oskouian, B., Kuypers, F.A., and Saba, J.D. 1999. The PLB2 gene of *Saccharomyces cerevisiae* confers resistance to lysophosphatidylcholine and encodes a phospholipase B/lysophospholipase. Biochemistry 38: 5864-5871.

SOURCE

Plb2 (yC-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Plb2 of *Saccharomyces cerevisiae* origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-21123 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Plb2 (yC-20) is recommended for detection of Plb2 of *Saccharomyces cerevisiae* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

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 or our catalog for detailed protocols and support products.