# preY (C-14): sc-54308



The Power to Question

#### **BACKGROUND**

The PIGY gene is responsible for encoding 2 distinct proteins, referred to as PIG-Y and preY, which share no sequence homology. PreY is a 114 amino acid protein that belongs to the PREY family. PreY localizes to the mitochondrion and contains one TRM112 domain. The PIG-Y protein is a phosphatidylinositol-glycan and functions as a component of the GPI-N-acetylglucosaminyltransferase (GPI-GnT) complex which is responsible for the first step in the biosynthesis of the glycosylphosphatidylinositol (GPI)-anchor. More specifically, this complex catalyzes the transfer of N-acetylglucosamine (GIcNAc) to phosphatidylinositol (PI) from UDP-GIcNAc. PIG-Y is critical for the funcional activity of GPI-GnT.

# **REFERENCES**

- Hong, Y., Ohishi, K., Watanabe, R., Endo, Y., Maeda, Y. and Kinoshita, T. 1999. GPI1 stabilizes an enzyme essential in the first step of glycosylphosphatidylinositol biosynthesis. J. Biol. Chem. 274: 18582-18588.
- 2. Tiede, A., Nischan, C., Schubert, J. and Schmidt, R.E. 2000. Characterisation of the enzymatic complex for the first step in glycosylphosphatidylinositol biosynthesis. Int. J. Biochem. Cell Biol. 32: 339-350.
- Ikezawa, H. 2002. Glycosylphosphatidylinositol (GPI)-anchored proteins. Biol. Pharm. Bull. 25: 409-417.
- Murakami, Y., Siripanyaphinyo, U., Hong, Y., Tashima, Y., Maeda, Y. and Kinoshita, T. 2005. The initial enzyme for glycosylphosphatidylinositol biosynthesis requires PIG-Y, a seventh component. Mol. Biol. Cell 16: 5236-5246.
- Newman, H.A., Romeo, M.J., Lewis, S.E., Yan, B.C., Orlean, P. and Levin, D.E. 2005. Gpi19, the *Saccharomyces cerevisiae* homologue of mammalian PIG-P, is a subunit of the initial enzyme for glycosylphosphatidylinositol anchor biosynthesis. Eukaryotic Cell 4: 1801-1807.
- Brodsky, R.A. 2006. New insights into paroxysmal nocturnal hemoglobinuria. Hematology Am. Soc. Hematol. Educ. Program 2006: 24-28.
- 7. Orlean, P. and Menon, A.K. 2007. Thematic review series: lipid posttranslational modifications. GPI anchoring of protein in yeast and mammalian cells, or: how we learned to stop worrying and love glycophospholipids. J. Lipid Res. 48: 993-1011.
- Li, H., Zhou, H., Luo, Y., Ouyang, H., Hu, H. and Jin, C. 2007. Glycosylphosphatidylinositol (GPI) anchor is required in *Aspergillus fumigatus* for morphogenesis and virulence. Mol. Microbiol. 64: 1014-1027.
- 9. Pittet, M. and Conzelmann, A. 2007. Biosynthesis and function of GPI proteins in the yeast *Saccharomyces cerevisiae*. Biochim. Biophys. Acta 1771: 405-420.

#### CHROMOSOMAL LOCATION

Genetic locus: PIGY (human) mapping to 4q22.1; Pigy (mouse) mapping to 6 B3.

## **SOURCE**

preY (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of preY of human origin.

#### **PRODUCT**

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-54308 P, ( $100 \mu g$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

preY (P-16) is recommended for detection of preY 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).

preY (C-14) is also recommended for detection of preY in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for PIG-Y siRNA (h): sc-76137, PIG-Y siRNA (m): sc-76138, PIG-Y shRNA Plasmid (h): sc-76137-SH, PIG-Y shRNA Plasmid (m): sc-76138-SH, PIG-Y shRNA (h) Lentiviral Particles: sc-76137-V and PIG-Y shRNA (m) Lentiviral Particles: sc-76138-V.

Molecular Weight of preY: 14 kDa.

#### **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. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## **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.

**Santa Cruz Biotechnology, Inc.** 1.800.457.3801 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**