SANTA CRUZ BIOTECHNOLOGY, INC.

PIG-S (G-10): sc-373701

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Phosphatidylinositol-glycans (PIGs) are multi-pass transmembrane proteins that localize to the endoplasmic reticulum. PIGs exhibit various functions but all are crucial for the biosynthesis of the glycosylphosphatidylinositol (GPI)-anchor. Some PIG proteins are components of the GPI transamidase (GPIT) complex and play a role in the recognition of either the GPI attachment signal or the lipid portion of GPI. Other PIGs belong to the glycosyltransferase complex and function in the transfer of N-acetylglucosamine (GlcNAc) to phosphatidylinositol (PI). A variety of other PIGs play distinct roles in GPI synthesis. PIG-S is a component of GPIT, a multisubunit membrane-bound complex that recognizes the C-terminal signal sequences on proproteins, cleaves them and replaces them with specific GPI lipids. PIG-S is required for the generation of the carbonyl intermediate.

REFERENCES

1. Ohishi, K., et al. 2001. PIG-S and PIG-T, essential for GPI anchor attachment to proteins, form a complex with GAA1 and GPI8. EMBO J. 20: 4088-4098.
2. Hong, Y., et al. 2003. Human PIG-U and yeast Cdc91p are the fifth subunit of GPI transamidase that attaches GPI-anchors to proteins. Mol. Biol. Cell 14: 1780-1789.
3. Nagamune, K., et al. 2003. GPI transamidase of *Trypanosoma brucei* has two previously uncharacterized (trypanosomatid transamidase 1 and 2) and three common subunits. Proc. Natl. Acad. Sci. USA 100: 10682-10687.

CHROMOSOMAL LOCATION

Genetic locus: PIGS (human) mapping to 17p11.2; Pigs (mouse) mapping to 11 B5.

SOURCE

PIG-S (G-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 199-231 within an internal region of PIG-S 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.

PIG-S (G-10) is available conjugated to agarose (sc-373701 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-373701 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373701 PE), fluorescein (sc-373701 FITC), Alexa Fluor® 488 (sc-373701 AF488), Alexa Fluor® 546 (sc-373701 AF546), Alexa Fluor® 594 (sc-373701 AF594) or Alexa Fluor® 647 (sc-373701 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373701 AF680) or Alexa Fluor® 790 (sc-373701 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-373701 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

PIG-S (G-10) is recommended for detection of PIG-S 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 PIG-S siRNA (h): sc-62808, PIG-S siRNA (m): sc-62809, PIG-S shRNA Plasmid (h): sc-62808-SH, PIG-S shRNA Plasmid (m): sc-62809-SH, PIG-S shRNA (h) Lentiviral Particles: sc-62808-V and PIG-S shRNA (m) Lentiviral Particles: sc-62809-V.

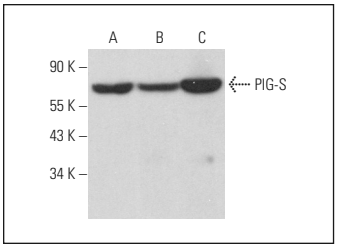
Molecular Weight of PIG-S: 65 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, HeLa whole cell lysate: sc-2200 or Jurkat whole cell lysate: sc-2204.

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



PIG-S (G-10): sc-373701. Western blot analysis of PIG-S expression in A-431 (**A**), Jurkat (**B**) and HeLa (**C**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lam, C., et al. 2015. Expanding the clinical and molecular characteristics of PIGT-CDG, a disorder of glycosylphosphatidylinositol anchors. Mol. Genet. Metab. 115: 128-140.

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.