

PIG-T (E-18): sc-54984

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-T 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-T is disulfide-linked to PIG-K and functions to stabilize the complex and promote GPIT activity. Overexpression of PIG-T is associated with breast cancer.

REFERENCES

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- 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.
- Ohishi, K., et al. 2003. Two subunits of glycosylphosphatidylinositol transamidase, GPI8 and PIG-T, form a functionally important intermolecular disulfide bridge. *J. Biol. Chem.* 278: 13959-13967.
- Vainauskas, S., et al. 2004. A conserved proline in the last transmembrane segment of Gaa1 is required for glycosylphosphatidylinositol (GPI) recognition by GPI transamidase. *J. Biol. Chem.* 279: 6540-6545.
- Wu, G., et al. 2006. Over-expression of glycosylphosphatidylinositol (GPI) transamidase subunits phosphatidylinositol glycan class T and/or GPI anchor attachment 1 induces tumorigenesis and contributes to invasion in human breast cancer. *Cancer Res.* 66: 9829-9836.
- Bowman, S.M., et al. 2006. Mutational analysis of the glycosylphosphatidylinositol (GPI) anchor pathway demonstrates that GPI-anchored proteins are required for cell wall biogenesis and normal hyphal growth in *Neurospora crassa*. *Eukaryotic Cell* 5: 587-600.

CHROMOSOMAL LOCATION

Genetic locus: PIGT (human) mapping to 20q13.12.

SOURCE

PIG-T (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PIG-T of human 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-54984 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIG-T (E-18) is recommended for detection of PIG-T of human origin by Western Blotting (starting dilution 1:200, 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).

PIG-T (E-18) is also recommended for detection of PIG-T in additional species, including canine.

Suitable for use as control antibody for PIG-T siRNA (h): sc-62810, PIG-T shRNA Plasmid (h): sc-62810-SH and PIG-T shRNA (h) Lentiviral Particles: sc-62810-V.

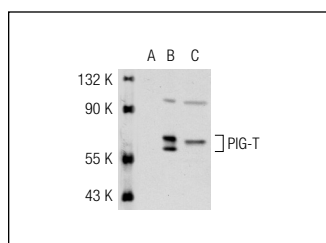
Molecular Weight of PIG-T: 62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, CCRF-CEM cell lysate: sc-2225 or PIG-T (h): 293T Lysate: sc-112231.

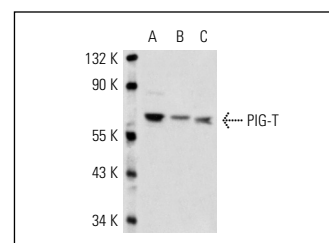
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



PIG-T (E-18): sc-54984. Western blot analysis of PIG-T expression in non-transfected 293T: sc-117752 (A), human PIG-T transfected 293T: sc-112231 (B) and HeLa (C) whole cell lysates.



PIG-T (E-18): sc-54984. Western blot analysis of PIG-T expression in HeLa (A), CCRF-CEM (B) and SW480 (C) 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.