SANTA CRUZ BIOTECHNOLOGY, INC.

PIG-H (S-15): sc-165238

BACKGROUND

Phosphatidylinositol-glycans (PIGs) are multi-pass transmembrane proteins that localize to endoplasmic reticulum (ER). PIGs are crucial for the synthesis of N-acetylglucosaminyl-phosphatidylinositol (GlcNAc-PI), a very early intermediate in glycosylphosphatidylinositol (GPI)-anchor biosynthesis. PIG proteins are components of the GPI transamidase complex and play a role in the recognition of either the GPI attachment signal or the lipid portion of GPI. PIG-H (phosphatidylinositol glycan anchor biosynthesis, class H), also known as phosphatidylinositol N-acetylglucosaminyltransferase subunit H or GPI-H, is a 188 amino acid ER transmembrane protein. PIG-H forms a complex with PIG-A and functions as a subunit of the ER GPI-GlcNAc transferase. PIG-H, PIG-A and PIG-C are required for the first step in GPI anchor biosynthesis. PIG-H also associates with PIG-A, PIG-C and PIG-Q, thereby forming a complex that participates in GPI-GlcNAc transferase activity *in vitro*.

REFERENCES

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2. Ware, R.E., et al. 1994. Chromosomal assignment of genes involved in glycosylphosphatidylinositol anchor biosynthesis: implications for the pathogenesis of paroxysmal nocturnal hemoglobinuria. Blood 83: 3753-3757.
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4. Watanabe, R., et al. 1996. PIG-A and PIG-H, which participate in glycosylphosphatidylinositol anchor biosynthesis, form a protein complex in the endoplasmic reticulum. J. Biol. Chem. 271: 26868-26875.
5. Nishimura, J., et al. 1997. A patient with paroxysmal nocturnal hemoglobinuria bearing four independent PIG-A mutant clones. Blood 89: 3470-3476.
6. Kinoshita, T., et al. 1997. GPI-anchor synthesis in mammalian cells: genes, their products, and a deficiency. J. Biochem. 122: 251-257.
7. Watanabe, R., et al. 1998. The first step of glycosylphosphatidylinositol biosynthesis is mediated by a complex of PIG-A, PIG-H, PIG-C and GPI1. EMBO J. 17: 877-885.
8. Kinoshita, T., et al. 2000. Dissecting and manipulating the pathway for glycosylphos-phatidylinositol-anchor biosynthesis. Curr. Opin. Chem. Biol. 4: 632-638.
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CHROMOSOMAL LOCATION

Genetic locus: PIGH (human) mapping to 14q24.1; Pigh (mouse) mapping to 12 C3.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

SOURCE

PIG-H (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of PIG-H 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-165238 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PIG-H (S-15) is recommended for detection of PIG-H 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); non cross-reactive with other PIG family members.

PIG-H (S-15) is also recommended for detection of PIG-H in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for PIG-H siRNA (h): sc-92111, PIG-H siRNA (m): sc-152251, PIG-H shRNA Plasmid (h): sc-92111-SH, PIG-H shRNA Plasmid (m): sc-152251-SH, PIG-H shRNA (h) Lentiviral Particles: sc-92111-V and PIG-H shRNA (m) Lentiviral Particles: sc-152251-V.

Molecular Weight of PIG-H: 21 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.