

GBGT1 (D-14): sc-164459

BACKGROUND

GBGT1 (globoside α -1,3-N-acetylgalactosaminyltransferase 1), also known as UNQ2513/PRO6002, is a 347 amino acid single-pass type II membrane protein that belongs to the glycosyltransferase 6 family. Localizing to the Golgi apparatus membrane, GBGT1 is widely expressed, with high levels found in placenta, ovary and peripheral blood leukocyte, and lower levels expressed in liver, thymus and testis. GBGT1 utilizes manganese as a cofactor, and assists in the addition of N-acetylgalactosamine (GalNAc) in α -1,3-linkage to various substrates, resulting in the formation of glycolipids. Glyco-lipids are present in most eukaryotic cells and may assist in the adherence of certain pathogens. Existing as two alternatively spliced isoforms, the gene encoding GBGT1 maps to human chromosome 9q34.2 and mouse chromosome 2 A3.

REFERENCES

1. Haslam, D.B. and Baenziger, J.U. 1996. Expression cloning of Forssman glycolipid synthetase: a novel member of the histo-blood group ABO gene family. *Proc. Natl. Acad. Sci. USA* 93: 10697-10702.
2. Xu, H., et al. 1999. Characterization of the human Forssman synthetase gene. An evolving association between glycolipid synthesis and host-microbial interactions. *J. Biol. Chem.* 274: 29390-29398.
3. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. *Genome Res.* 13: 2265-2270.
4. Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
5. Casals, F., et al. 2009. Human pseudogenes of the ABO family show a complex evolutionary dynamics and loss of function. *Glycobiology* 19: 583-591.
6. Szperl, A.M., et al. 2011. Exome sequencing in a family segregating for celiac disease. *Clin. Genet.* 80: 138-147.

CHROMOSOMAL LOCATION

Genetic locus: GBGT1 (human) mapping to 9q34.2; Gbgt1 (mouse) mapping to 2 A3.

SOURCE

GBGT1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GBGT1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-164459 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

GBGT1 (D-14) is recommended for detection of GBGT1 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).

GBGT1 (D-14) is also recommended for detection of GBGT1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GBGT1 siRNA (h): sc-92644, GBGT1 siRNA (m): sc-145350, GBGT1 shRNA Plasmid (h): sc-92644-SH, GBGT1 shRNA Plasmid (m): sc-145350-SH, GBGT1 shRNA (h) Lentiviral Particles: sc-92644-V and GBGT1 shRNA (m) Lentiviral Particles: sc-145350-V.

Molecular Weight of GBGT1 isoforms 1/2: 40/33 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.

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.