SANTA CRUZ BIOTECHNOLOGY, INC.

iGb3 (P-15): sc-168134

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

IGb3 (isogloboside 3), also known as isoglobotrihexosylceramide, A3GALT2 (α 1,3-galactosyltransferase 2), A3GALT2P or IGBS3S (isoglobotriaosylceramide synthase), is a 370 amino acid protein that belongs to the glycosyltransferase 6 family. Involved in natural killer T cell development, iGb3 also synthesizes the galactose-α(1,3)-galactose group on α-galactose. Localizing to Golgi apparatus, IGb3 glycosylates lipids and binds manganese as a cofactor. The gene encoding iGb3 maps to human chromosome 1, which spans 260 million base pairs and contains over 3,000 genes. Human chromosome 1 comprises nearly 8% of the human genome and houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome.

REFERENCES

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2. Lau, E.K., et al. 1999. Two novel polymorphic sequences in the glucocerebrosidase gene region enhance mutational screening and founder effect studies of patients with Gaucher disease. Hum. Genet. 104: 293-300.
3. Plasilova, M., et al. 2004. Exclusion of an extracolonic disease modifier locus on chromosome 1p33-36 in a large Swiss familial adenomatous polyposis kindred. Eur. J. Hum. Genet. 12: 365-371.
4. Oliveira, S.A., et al. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. Am. J. Hum. Genet. 77: 252-264.
5. Porubsky, S., et al. 2007. Normal development and function of invariant natural killer T cells in mice with isoglobotrihexosylceramide (iGb3) deficiency. Proc. Natl. Acad. Sci. USA 104: 5977-5982.
6. Christiansen, D., et al. 2008. Humans lack iGb3 due to the absence of functional iGb3-synthase: implications for NKT cell development and transplantation. PLoS Biol. 6: e172.
7. Yurov, Y.B., et al. 2008. The schizophrenia brain exhibits low-level aneuploidy involving chromosome 1. Schizophr. Res. 98: 139-147.
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CHROMOSOMAL LOCATION

Genetic locus: A3GALT2P (human) mapping to 1p35.1.

SOURCE

iGb3 (P-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of iGb3 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-168134 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

iGb3 (P-15) is recommended for detection of iGb3 of 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).

Molecular Weight of iGb3: 43 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.

MONOS Satisfaction Guaranteed

Try **iGb3 (D-2): sc-515685**, our highly recommended monoclonal alternative to iGb3 (P-15).