



GM3 Synthase (R-40): sc-67313

BACKGROUND

GM3 Synthase, also known as sialyltransferase 9 or ST3Gal V, is a Golgi type II transmembrane glycosyltransferase predominantly expressed in brain and placenta. It belongs to the glycosyltransferase family 29 and is involved in the biosynthesis of complex gangliosides. In particular, GM3 Synthase catalyzes the transfer of α sialic acid to the terminal galactose of lactosylceramide to form the ganglioside GM3. GM3 is the simplest ganglioside and it participates in cell differentiation, signal transduction and modulation of cell proliferation. The synthesis of GM3 by GM3 Synthase is the first major step in the formation of almost all other gangliosides. For this reason, GM3 Synthase acts as a key regulatory enzyme in the biosynthesis of gangliosides. A mutation in the gene encoding GM3 Synthase can lead to the inability to synthesize α - and β -series gangliosides and may result in Amish infantile epilepsy syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: St3gal5 (mouse) mapping to 6 C1.

SOURCE

GM3 Synthase (R-40) is a rabbit polyclonal antibody raised against amino acids 91-130 mapping within an internal region of GM3 Synthase of rat origin.

PRODUCT

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

APPLICATIONS

GM3 Synthase (R-40) is recommended for detection of GM3 Synthase of rat and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 GM3 Synthase siRNA (m): sc-72298, GM3 Synthase shRNA Plasmid (m): sc-72298-SH and GM3 Synthase shRNA (m) Lentiviral Particles: sc-72298-V.

Molecular Weight of GM3 Synthase: 60 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.