

GM2/GD2 Synthase (M-180): sc-67311

BACKGROUND

GM2/GD2 Synthase is a 533 amino acid protein encoded by the human gene B4GALNT1. The GM2 and GD2 gangliosides are sialic acid-containing glycosphingolipids that play a role in signal transduction and cell-cell recognition. GM2/GD2 Synthase is expressed abundantly in normal brain tissue of vertebrates. It contains a single 18 amino acid hydrophobic segment near the amino-terminus flanked by basic residues. GM2/GD2 Synthase primarily controls the balance between expression of simple and complex gangliosides at the cell surface. The ganglioside GD2 is expressed using GM2/GD2 Synthase in almost all neuroblastomas (NBs) as well as other neuroectoderm-derived tumor cells, such as malignant melanoma, adult T cell leukemia and some colon and gastric cancers. GM2/GD2 Synthase is a useful marker for NBs and may aid in evaluating adjuvant treatment efficacy in neuroblastoma with prognostic potential.

CHROMOSOMAL LOCATION

Genetic locus: B4GALNT1 (human) mapping to 12q13.2; B4galnt1 (mouse) mapping to 10 D3.

SOURCE

GM2/GD2 Synthase (M-180) is a rabbit polyclonal antibody raised against amino acids 1-180 mapping at the N-terminus of GM2 of mouse origin.

PRODUCT

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

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.

APPLICATIONS

GM2/GD2 Synthase (M-180) is recommended for detection of GM2/GD2 synthase of mouse, rat and, to a lesser extent, 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).

Suitable for use as control antibody for GM2/GD2 Synthase siRNA (h): sc-105401, GM2/GD2 Synthase siRNA (m): sc-77390, GM2/GD2 Synthase shRNA Plasmid (h): sc-105401-SH, GM2/GD2 Synthase shRNA Plasmid (m): sc-77390-SH, GM2/GD2 Synthase shRNA (h) Lentiviral Particles: sc-105401-V and GM2/GD2 Synthase shRNA (m) Lentiviral Particles: sc-77390-V.

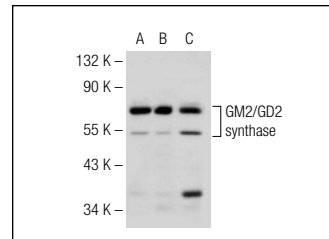
Molecular Weight of GM2/GD2 Synthase: 59 kDa.

Positive Controls: GM2/GD2 Synthase (m): 293T Lysate: sc-120535, HeLa whole cell lysate: sc-2200 or mouse brain extract: sc-2253.

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.

DATA



GM2/GD2 Synthase (M-180): sc-67311. Western blot analysis of GM2/GD2 Synthase expression in non-transfected 293T: sc-117752 (A), mouse GM2/GD2 Synthase transfected 293T: sc-120535 (B) and HeLa (C) whole cell lysates.

PROTOCOLS

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Try **GM2/GD2 Synthase (C-5): sc-376505**, our highly recommended monoclonal alternative to GM2/GD2 Synthase (M-180).