

# GD3 Synthase (H-76): sc-99093

## BACKGROUND

GD3 Synthase (GD3S, SIAT8, ST8Sial, ST8  $\alpha$ -N-acetyl-neuraminidase  $\alpha$ -2,8-sialyltransferase 1) is a type II membrane protein that catalyzes the transfer of sialic acid from CMP-sialic acid to GM3 to produce gangliosides GD3 and GT3. Gangliosides are membrane-bound glycosphingolipids containing sialic acid. Ganglioside GD3 is known to be important for cell adhesion and growth of cultured malignant cells. GD3 Synthase is found in the Golgi apparatus and is a member of glycosyltransferase family 29. GD3 Synthase can down-regulate MMP-9 promoter activity in response to TNF $\alpha$  by association with NF $\kappa$ B and activation protein-1 (AP-1) sites in the MMP-9 promoter. GD3 Synthase has an apoptotic effect on ECV304 cells through downregulation of Bcl-2 expression via dephosphorylation of AKT and CREB.

## CHROMOSOMAL LOCATION

Genetic locus: ST8SIA1 (human) mapping to 12p12.1; St8sia1 (mouse) mapping to 6 G3.

## SOURCE

GD3 Synthase (H-76) is a rabbit polyclonal antibody raised against amino acids 65-140 mapping near the N-terminus of GD3 Synthase of human origin.

## PRODUCT

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

## STORAGE

Store at 4 $^{\circ}$  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

GD3 Synthase (H-76) is recommended for detection of GD3 Synthase of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GD3 Synthase (H-76) is also recommended for detection of GD3 Synthase in additional species, including equine, canine and bovine.

Suitable for use as control antibody for GD3 Synthase siRNA (h): sc-44586, GD3 Synthase siRNA (m): sc-44587, GD3 Synthase shRNA Plasmid (h): sc-44586-SH, GD3 Synthase shRNA Plasmid (m): sc-44587-SH, GD3 Synthase shRNA (h) Lentiviral Particles: sc-44586-V and GD3 Synthase shRNA (m) Lentiviral Particles: sc-44587-V.

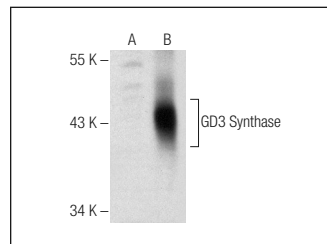
Molecular Weight of GD3 Synthase: 50 kDa.

Positive Controls: GD3 Synthase (m): 293T Lysate: sc-120460.

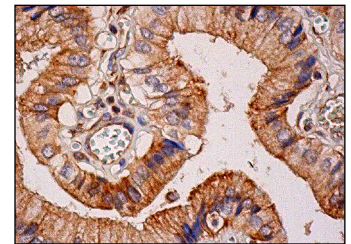
## RECOMMENDED SECONDARY REAGENTS

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<sup>TM</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>TM</sup> 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<sup>TM</sup> Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz<sup>TM</sup>: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



GD3 Synthase (H-76): sc-99093. Western blot analysis of GD3 Synthase expression in non-transfected: sc-117752 (A) and mouse GD3 Synthase transfected: sc-120460 (B) 293T whole cell lysates.



GD3 Synthase (H-76): sc-99093. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic and membrane staining of glandular cells.

## PROTOCOLS

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Try **GD3 Synthase (B-11): sc-390123**, our highly recommended monoclonal alternative to GD3 Synthase (H-76).