

Sialyltransferase 7D (C-19): sc-68810

BACKGROUND

Sialyltransferase 7D, also known as ST6GALNAC4 (ST6 (α -N-acetyl-neuraminyl-2,3 β -galactosyl-1,3)-N-acetylglucosaminide α 2,6-sialyltransferase 4), SIAT3C or SIAT7D, is a 302 amino acid single-pass type II membrane protein that localizes to the Golgi apparatus, but may also exist in a proteolytically processed soluble form. Expressed ubiquitously, Sialyltransferase 7D functions to catalyze the transfer of sialic acid from CMP-sialic acid to galactose-containing substrates in a substrate-specific manner, showing increased activity toward glycoproteins rather than glycolipids. Multiple isoforms of Sialyltransferase 7D exist due to alternative splicing events. The gene encoding Sialyltransferase 7D maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Gilley, J., et al. 1999. Extensive gene order differences within regions of conserved synteny between the Fugu and human genomes: implications for chromosomal evolution and the cloning of disease genes. *Hum. Mol. Genet.* 8: 1313-1320.
2. Lee, Y.C., et al. 1999. Molecular cloning and functional expression of two members of mouse NeuA α 2,3Gal β 1,3GalNAc GalNAc α 2,6-sialyltransferase family, ST6GalNAc III and IV. *J. Biol. Chem.* 274: 11958-11967.
3. Okajima, T., et al. 1999. Molecular cloning of brain-specific GD1 α synthase (ST6GalNAc V) containing CAG/Glutamine repeats. *J. Biol. Chem.* 274: 30557-30562.
4. Harduin-Lepers, A., et al. 2000. Cloning, expression and gene organization of a human Neu5A α 2,3Gal β 1,3GalNAc α 2,6-sialyltransferase: hST6GalNAcIV. *Biochem. J.* 352: 37-48.
5. Kim, S.W., et al. 2003. Genomic structure and promoter analysis of human NeuA α 2,3Gal β 1,3GalNAc α 2,6-sialyltransferase (hST6GalNAc IV) gene. *Gene* 305: 113-120.

CHROMOSOMAL LOCATION

Genetic locus: ST6GALNAC4 (human) mapping to 9q34.11; St6galnac4 (mouse) mapping to 2 B.

SOURCE

Sialyltransferase 7D (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Sialyltransferase 7D 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-68810 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

Sialyltransferase 7D (C-19) is recommended for detection of Sialyltransferase 7D of mouse, rat and human 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).

Sialyltransferase 7D (C-19) is also recommended for detection of Sialyltransferase 7D in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Sialyltransferase 7D siRNA (h): sc-63020, Sialyltransferase 7D siRNA (m): sc-63021, Sialyltransferase 7D shRNA Plasmid (h): sc-63020-SH, Sialyltransferase 7D shRNA Plasmid (m): sc-63021-SH, Sialyltransferase 7D shRNA (h) Lentiviral Particles: sc-63020-V and Sialyltransferase 7D shRNA (m) Lentiviral Particles: sc-63021-V.

Molecular Weight (predicted) of Sialyltransferase 7D: 35 kDa.

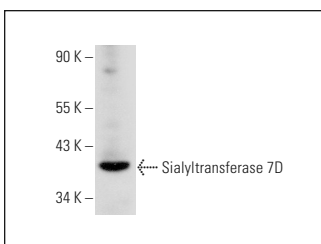
Molecular Weight (observed) of Sialyltransferase 7D: 40 kDa.

Positive Controls: human skeletal muscle extract: sc-363776.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



Sialyltransferase 7D (C-19): sc-68810. Western blot analysis of Sialyltransferase 7D expression in human skeletal muscle tissue extract.

RESEARCH USE

For research use only, not for use in diagnostic procedures.