

Ganglioside sialidase (N-18): sc-55826

BACKGROUND

Ganglioside sialidase is a 428 amino acid protein encoded by the human gene NEU3 and a peripheral membrane protein that belongs to the glycosyl hydrolase 33 family. Members of this family contain multiple BNR (bacterial neuraminidase repeat) repeats or Asp-boxes. The repeats are short and are never found closer than 40 residues together, suggesting that the repeat is structurally longer. These repeats are found in a variety of non-homologous proteins, including bacterial ribonucleases, Reelin, netrins, sialidases, neuraminidases and a variety of glycosyl hydrolases. Ganglioside sialidase plays a role in modulating the ganglioside content of the lipid bilayer at the level of membrane-bound sialyl glycoconjugates. Ganglioside sialidase is responsible for the catalytic hydrolysis of α -glycosidic linkages on terminal sialic residues in oligosaccharides, glycoproteins, glycolipids, colominic acid and synthetic substrates. Ganglioside sialidase is highly expressed in skeletal muscle, testis, adrenal gland and thymus, followed by pancreas, liver, heart and thymus. It is weakly expressed in kidney, placenta, brain and lung.

REFERENCES

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- Yamaguchi, K., et al. 2006. Epidermal growth factor-induced mobilization of a ganglioside-specific sialidase (NEU3) to membrane ruffles. *Biochem. Biophys. Res. Commun.* 346: 484-490.
- Valaperta, R., et al. 2006. Plasma membrane production of ceramide from ganglioside GM3 in human fibroblasts. *FASEB J.* 20: 1227-1229.
- Chung, E.S., et al. 2006. Disialogangliosides induce neurodegeneration in rat mesencephalic cultures. *Biochem. Biophys. Res. Commun.* 346: 572-577.
- Kato, K., et al. 2006. Plasma-membrane-associated sialidase (NEU3) differentially regulates integrin-mediated cell proliferation through Laminin- and Fibronectin-derived signalling. *Biochem. J.* 394: 647-656.
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CHROMOSOMAL LOCATION

Genetic locus: NEU3 (human) mapping to 11q13.4.

SOURCE

Ganglioside sialidase (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Ganglioside sialidase 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-55826 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ganglioside sialidase (N-18) is recommended for detection of Ganglioside sialidase of 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).

Ganglioside sialidase (N-18) is also recommended for detection of Ganglioside sialidase in additional species, including canine.

Suitable for use as control antibody for Ganglioside sialidase siRNA (h): sc-62366, Ganglioside sialidase shRNA Plasmid (h): sc-62366-SH and Ganglioside sialidase shRNA (h) Lentiviral Particles: sc-62366-V.

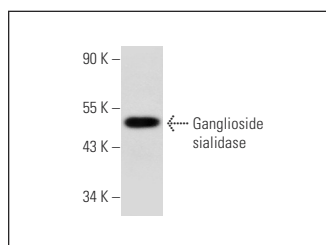
Molecular Weight of Ganglioside sialidase: 48 kDa.

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



Ganglioside sialidase (N-18): sc-55826. Western blot analysis of Ganglioside sialidase expression in human skeletal muscle tissue extract.

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.