SANTA CRUZ BIOTECHNOLOGY, INC.

# Ganglioside sialidase (H-75): sc-134930

## BACKGROUND

Ganglioside sialidase is a 428 amino acid protein encoded by the human gene NEU3. Ganglioside sialidase is 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, however the repeats 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 $\alpha$-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


1. Mueller, O.T. and Wenger, D.A. 1981. Mucolipidosis I: studies of sialidase activity and a prenatal diagnosis. Clin. Chim. Acta 109: 313-324.
2. 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.
3. Valaperta, R., et al. 2006. Plasma membrane production of ceramide from ganglioside GM3 in human fibroblasts. FASEB J. 20: 1227-1229.
4. Chung, E.S. and Jin, B.K. 2006. Disialogangliosides induce neurodegeneration in rat mesencephalic cultures. Biochem. Biophys. Res. Commun. 346: 572-577.
5. 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.


## CHROMOSOMAL LOCATION

Genetic locus: NEU3 (human) mapping to 11q13.4; Neu3 (mouse) mapping to 7 E2.

## SOURCE

Ganglioside sialidase (H-75) is a rabbit polyclonal antibody raised against amino acids 181-255 mapping within an internal region of Ganglioside sialidase of human 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.

## APPLICATIONS

Ganglioside sialidase (H-75) is recommended for detection of Ganglioside sialidase of human and, to a lesser extent, mouse and rat 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).

Ganglioside sialidase (H-75) is also recommended for detection of Ganglioside sialidase in additional species, including equine, canine and bovine.

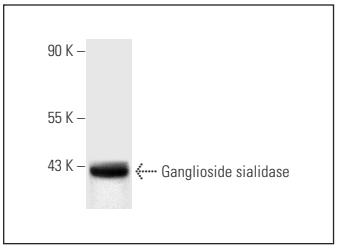
Suitable for use as control antibody for Ganglioside sialidase siRNA (h): sc-62366, Ganglioside sialidase siRNA (m): sc-62367, Ganglioside sialidase shRNA Plasmid (h): sc-62366-SH, Ganglioside sialidase shRNA Plasmid (m): sc-62367-SH, Ganglioside sialidase shRNA (h) Lentiviral Particles: sc-62366-V and Ganglioside sialidase shRNA (m) Lentiviral Particles: sc-62367-V.

Molecular Weight of Ganglioside sialidase: 48 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.

## DATA




Ganglioside sialidase (H-75): sc-134930. Western blot analysis of Ganglioside sialidase expression in NIH/3T3 whole cell lysate.

## 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.