

Sialin (V-18): sc-50977

BACKGROUND

Sialin, also designated sodium/sialic acid cotransporter or membrane glycoprotein HP59, belongs to the major facilitator superfamily and the sodium/anion cotransporter family of proteins. Sialin acts as a solute translocator for anionic substances; in lysosomes it is a free sialic acid transporter. Sialin is a multi-pass membrane protein that localizes to the lysosome and is primarily detected in fetal lung and small intestine. It is also expressed in adult placenta, kidney and pancreas, and may be detected in colon, breast and ovary tumor endothelial cells as well. Defects in the SLC17A5 gene, which encodes the Sialin protein, can cause several disorders including Salla disease, an autosomal recessive sialic acid storage disease, as well as infantile sialic acid storage disorder (ISSD), a severe form of sialic acid storage disease in which affected newborns exhibit coarse features, visceromegaly (an enlargement of the internal organs) and a failure to thrive after birth.

REFERENCES

1. Biancheri, R., et al. 2005. Homo-zygosity for the p.K136E mutation in the SLC17A5 gene as cause of an Italian severe Salla disease. *Neurogenetics* 6: 195-199.
2. Allen, S., et al. 2005. Novel sialic acid transporter of *Haemophilus influenzae*. *Infect. Immun.* 73: 5291-5300.
3. Post, D.M., et al. 2005. Identification of a novel sialic acid transporter in *Haemophilus ducreyi*. *Infect. Immun.* 73: 6727-6735.
4. Yarovaya, N., et al. 2005. Sialin, an anion transporter defective in sialic acid storage diseases, shows highly variable expression in adult mouse brain, and is developmentally regulated. *Neurobiol. Dis.* 19: 351-365.
5. Wreden, C.C., et al. 2005. Varied mechanisms underlie the free sialic acid storage disorders. *J. Biol. Chem.* 280: 1408-1416.
6. Morse, R.P., et al. 2006. Novel form of intermediate Salla disease: clinical and neuroimaging features. *J. Child Neurol.* 20: 814-816.

CHROMOSOMAL LOCATION

Genetic locus: SLC17A5 (human) mapping to 6q13; Slc17a5 (mouse) mapping to 9 E1.

SOURCE

Sialin (V-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Sialin 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.

Blocking peptide available for competition studies, sc-50977 P, (100 µg 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

Sialin (V-18) is recommended for detection of Sialin of mouse, rat and 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).

Sialin (V-18) is also recommended for detection of Sialin in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Sialin siRNA (h): sc-61545, Sialin siRNA (m): sc-61546, Sialin shRNA Plasmid (h): sc-61545-SH, Sialin shRNA Plasmid (m): sc-61546-SH, Sialin shRNA (h) Lentiviral Particles: sc-61545-V and Sialin shRNA (m) Lentiviral Particles: sc-61546-V.

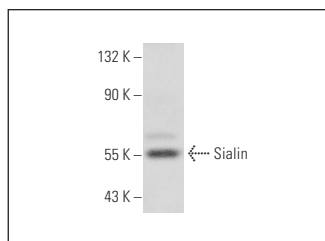
Molecular Weight of Sialin: 55 kDa.

Positive Controls: THP-1 cell lysate: sc-2238.

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



Sialin (V-18): sc-50977. Western blot analysis of Sialin expression in THP-1 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.