

# HGSNAT (S-18): sc-82625

## BACKGROUND

HGSNAT (heparan- $\alpha$ -glucosaminide N-acetyltransferase), also known as HGNAT, MPS3C or TMEM76, is a 663 amino acid multi-pass membrane protein that localizes to the lysosome and is expressed in a wide variety of tissues, including liver, lung, placenta, heart and skeletal muscle. Functioning as a lysosomal acetyltransferase, HGSNAT acetylates the non-reducing terminal  $\alpha$ -glucosamine residue of intralysosomal heparin or heparan sulfate, effectively producing a substrate for luminal  $\alpha$ -N-acetyl glucosaminidase. Defects in the gene encoding HGSNAT are the cause of mucopolysaccharidosis type 3C (MPS3C), an autosomal recessive lysosomal storage disease that is caused by impaired heparan sulfate degradation and is characterized by degeneration of the central nervous system.

## REFERENCES

1. Bame, K.J. and Rome, L.H. 1986. Genetic evidence for transmembrane acetylation by lysosomes. *Science* 233: 1087-1089.
2. Meikle, P.J., et al. 1995. Human acetyl-coenzyme A: $\alpha$ -glucosaminide N-acetyltransferase. Kinetic characterization and mechanistic interpretation. *Biochem. J.* 308: 327-333.
3. Ausseil, J., et al. 2004. Localisation of a gene for mucopolysaccharidosis IIIC to the pericentromeric region of chromosome 8. *J. Med. Genet.* 41: 941-945.
4. Fan, X., et al. 2006. Identification of the gene encoding the enzyme deficient in mucopolysaccharidosis IIIC (Sanfilippo disease type C). *Am. J. Hum. Genet.* 79: 738-744.
5. Hrebíček, M., et al. 2006. Mutations in TMEM76\* cause mucopolysaccharidosis IIIC (Sanfilippo C syndrome). *Am. J. Hum. Genet.* 79: 807-819.

## CHROMOSOMAL LOCATION

Genetic locus: HGSNAT (human) mapping to 8p11.21; Hgsnat (mouse) mapping to 8 A2.

## SOURCE

HGSNAT (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of HGSNAT 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.

Blocking peptide available for competition studies, sc-82625 P, (100  $\mu$ 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

## APPLICATIONS

HGSNAT (S-18) is recommended for detection of HGSNAT 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HGSNAT (S-18) is also recommended for detection of HGSNAT in additional species, including equine, canine and bovine.

Suitable for use as control antibody for HGSNAT siRNA (h): sc-75251, HGSNAT siRNA (m): sc-75252, HGSNAT shRNA Plasmid (h): sc-75251-SH, HGSNAT shRNA Plasmid (m): sc-75252-SH, HGSNAT shRNA (h) Lentiviral Particles: sc-75251-V and HGSNAT shRNA (m) Lentiviral Particles: sc-75252-V.

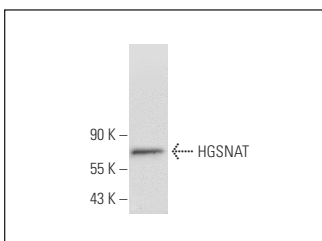
Molecular Weight of HGSNAT: 73 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## 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



HGSNAT (S-18): sc-82625. Western blot analysis of HGSNAT expression in HeLa whole cell lysate.

## RESEARCH USE

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