

# GNS (D-14): sc-161668

## BACKGROUND

GNS (glucosamine (N-acetyl)-6-sulfatase), also known as G6S (glucosamine-6-sulfatase), is a 552 amino acid lysosomal enzyme that hydrolyzes the 6-sulfate groups of the N-acetyl-D-glucosamine 6-sulfate units of keratan sulfate and heparan sulfate. A member of the sulfatase family, GNS assists in the catabolism of heparin, and binds calcium as a cofactor. GNS deficiency results in an autosomal recessive lysosomal storage disorder known as mucopolysaccharidosis type IIID (sanfilippo D syndrome), which is characterized by mild somatic disease and severe degeneration of the central nervous system. Subject to post-translational internal peptidase cleavage, GNS is encoded by a gene mapping to human chromosome 12q14.3 and mouse chromosome 10 D2.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: GNS (human) mapping to 12q14.3; Gns (mouse) mapping to 10 D2.

## SOURCE

GNS (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GNS of human origin.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## 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-161668 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GNS (D-14) is recommended for detection of GNS 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).

GNS (D-14) is also recommended for detection of GNS in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for GNS siRNA (h): sc-96024, GNS siRNA (m): sc-145660, GNS shRNA Plasmid (h): sc-96024-SH, GNS shRNA Plasmid (m): sc-145660-SH, GNS shRNA (h) Lentiviral Particles: sc-96024-V and GNS shRNA (m) Lentiviral Particles: sc-145660-V.

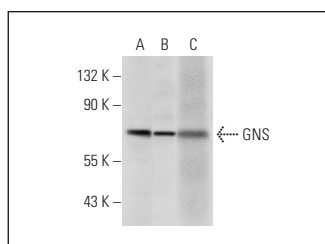
Molecular Weight of GNS: 62 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, NIH/3T3 whole cell lysate: sc-2210 or mouse prostate extract: sc-364249.

## 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



GNS (D-14): sc-161668. Western blot analysis of GNS expression in Hep G2 (A) and NIH/3T3 (B) whole cell lysates and mouse prostate tissue extract (C).

## RESEARCH USE

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