

# NANS (N-14): sc-163115

## BACKGROUND

Sialic acids are a family of 9-carbon 2-keto-3-deoxy sugars that are found on the ends of glycoproteins and glycolipids and play important roles in recognition events within the cell. NANS (N-acetylneuraminic acid synthase), also known as SAS, is a 359 amino acid protein that contains one AFP (antifreeze proteins)-like domain and functions in the biosynthesis of sialic acids. Expressed ubiquitously, NANS enzymatically catalyzes the H<sub>2</sub>O-dependent formation of N-acetylneuraminic acid (Neu5Ac) and 2-keto-3-deoxy-D-glycero-D-galacto-nononic acid (KDN), both of which are sialic acids. NANS uses N-acetylmannosamine 6-phosphate as a substrate for Neu5Ac synthesis and mannose 6-phosphate as a substrate for KDN synthesis. Human NANS shares 36% identity with the *E. coli* protein neuB, suggesting a conserved function between species.

## REFERENCES

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3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605202. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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5. Hamada, T., Ito, Y., Abe, T., Hayashi, F., Güntert, P., Inoue, M., Kigawa, T., Terada, T., Shirouzu, M., Yoshida, M., Tanaka, A., Sugano, S., Yokoyama, S. and Hirota, H. 2006. Solution structure of the antifreeze-like domain of human sialic acid synthase. *Protein Sci.* 15: 1010-1016.

## CHROMOSOMAL LOCATION

Genetic locus: NANS (human) mapping to 9q22.33; Nans (mouse) mapping to 4 B1.

## SOURCE

NANS (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of NANS 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.

## RESEARCH USE

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

## 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-163115 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NANS (N-14) is recommended for detection of NANS 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).

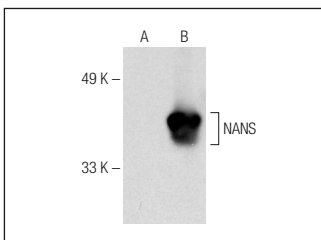
NANS (N-14) is also recommended for detection of NANS in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for NANS siRNA (h): sc-92845, NANS siRNA (m): sc-149822, NANS shRNA Plasmid (h): sc-92845-SH, NANS shRNA Plasmid (m): sc-149822-SH, NANS shRNA (h) Lentiviral Particles: sc-92845-V and NANS shRNA (m) Lentiviral Particles: sc-149822-V.

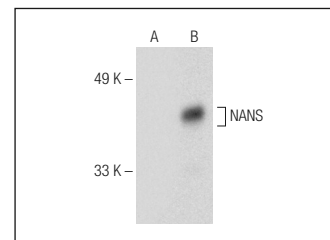
Molecular Weight of NANS: 40 kDa.

Positive Controls: NANS (m): 293T Lysate: sc-125684, PC-3 cell lysate: sc-2220 or HeLa whole cell lysate: sc-2200.

## DATA



NANS (N-14): sc-163114. Western blot analysis of NANS expression in non-transfected: sc-117752 (A) and mouse NANS transfected: sc-125684 (B) 293T whole cell lysates.



NANS (N-14): sc-163115. Western blot analysis of NANS expression in non-transfected: sc-117752 (A) and mouse NANS transfected: sc-125685 (B) 293T whole cell lysates.

## PROTOCOLS

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