

# Recombinant Human N-acetylneuraminic Acid Synthase, His-tagged

**Cat. No.** NANS-2867H    **Lot. No.** (See product label)

## SPECIFICATION

|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b>         | Recombinant human NANS protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques. MW = 42.4 kDa (379aa) confirmed by MALDI-TOF.                                                                                                                                                                                                                                                                                                                                  |
| <b>Species</b>                  | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>                   | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>              | NANS, 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. |
| <b>Sequences Of Amino Acids</b> | MGSSHHHHHH SSGLVPRGSH MPLELELCPG RWVGGQHPCF IIAEIGQNHQ<br>GDLDVAKRMI RMAKECGADC AKFQKSELEF KFN RKALERP YTSKHSWGKT<br>YGEHKRHLEF SHDQYRELQR YAEVVGIFFT ASGMDEMAVE FLHELNPFF<br>KVGSGDTNNF PYLEKTAKKG RPMVISSGMQ SMDTMKQVYQ IVKPLNPFC<br>FLQCTSAYPL QPEDVNLRLVI SEYQKLFPDI PIGYSGHETG IAISVAVAL<br>GAKVLERHIT LDKTWKGSDH SASLEPGELA ELVRSVRLVE RALGSPTKQL<br>LPCEMACNEK LGKSVVAKVK IPEGTILTMD MLTVKVGE PK GYPEDIFNL                                                                                                                    |

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VGKKVLVTVE EDDTIMEELV DNHGKKIKS

**Purity** > 95% by SDS – PAGE.

**Form** Liquid. In 20 mM Tris-HCl buffer (pH8.0) containing 0.1M NaCl, 1mM DTT, 10% glycerol.

**Concentration** 0.5 mg/ml (determined by Bradford assay).

**Storage** Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

## GENE INFORMATION

**Gene Name** [NANS N-acetylneuraminic acid synthase \[ Homo sapiens \]](#)

**Synonyms** NANS; N-acetylneuraminic acid synthase; SAS; sialic acid synthase; N-acetylneuraminate synthase; sialic acid phosphate synthase; N-acetylneuraminate-9-phosphate synthase; N-acetylneuraminic acid phosphate synthase; EC 2.5.1.56; EC 2.5.1.57

**Gene ID** [54187](#)

**mRNA Refseq** [NM\\_018946](#)

**Protein Refseq** [NP\\_061819](#)

**MIM** [605202](#)

**UniProt ID** [Q9NR45](#)

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|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b> | 9p24.1-p23                                                                                                                                                  |
| <b>Pathway</b>             | Amino sugar and nucleotide sugar metabolism; Metabolic pathways                                                                                             |
| <b>Function</b>            | N-acetylneuraminate synthase activity; N-acylneuraminate cytidyltransferase activity; N-acylneuraminate-9-phosphate synthase activity; transferase activity |

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