

Recombinant Human N-acetylneuraminic Acid Synthase, His-tagged

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

SPECIFICATION

Product Overview	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.
Species	Human
Source	E.coli
Description	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 ₂ 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.
Sequences Of Amino Acids	MGSSHHHHHH SSGLVPRGSH MPLELELCPG RWVGGQHPCF IIAEIGQNHQ GDLDVAKRMI RMAKECGADC AKFQKSELEF KFN RKALERP YTSKHSWGKT YGEHKRHLEF SHDQYRELQR YAEVGIFFT ASGMDEMAVE FLHELNPFF KVGSGDTNNF PYLEKTAKKG RPMVISSGMQ SMDTMKQVYQ IVKPLNPFC FLQCTSAYPL QPEDVNLRLVI SEYQKLFPDI PIGYSGHETG IAISVAAVAL GAKVLERHIT LDKTWKGSDH SASLEPGELA ELVRSVRLVE RALGSPTKQL LPCEMACNEK LGKSVVAKVK IPEGTILTMD MLTVKVGEPK 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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Chromosome Location	9p24.1-p23
Pathway	Amino sugar and nucleotide sugar metabolism; Metabolic pathways
Function	N-acetylneuraminate synthase activity; N-acylneuraminate cytidyltransferase activity; N-acylneuraminate-9-phosphate synthase activity; transferase activity
	