

Recombinant Human NANS, His-tagged

Cat. No. NANS-28783TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human NANS with N terminal His tag; 379 amino acids with tag; MWt 42.4kDa.
Species	Human
Source	E.coli
ProteinLength	359 amino acids
Description	This gene encodes an enzyme that functions in the biosynthetic pathways of sialic acids. In vitro, the encoded protein uses N-acetylmannosamine 6-phosphate and mannose 6-phosphate as substrates to generate phosphorylated forms of N-acetylneuraminic acid (Neu5Ac) and 2-keto-3-deoxy-D-glycero-D-galacto-nononic acid (KDN), respectively; however, it exhibits much higher activity toward the Neu5Ac phosphate product. In insect cells, expression of this gene results in Neu5Ac and KDN production. This gene is related to the E. coli sialic acid synthase gene neuB, and it can partially restore sialic acid synthase activity in an E. coli neuB-negative mutant.
Conjugation	HIS
Molecular Weight	42.400kDa inclusive of tags
Tissue specificity	Ubiquitous.
Form	Liquid

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Purity	>95% by SDS-PAGE
Storage buffer	Preservative: None Constituents: 10% Glycerol, 0.1M Sodium chloride, 20mM Tris HCl, 1mM DTT, pH 8.0
Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	MGSSHHHHHHSSGLVPRGSHMPLELELCPCRWWGGQHPCFIIAEIGQNHQGDLDV AKRMIRMAKECGADCAKFQKSELEFKFNRKALERPYTSKHSWGKTYGEHKRHLEFS HDQYRELQRYAAEEVGIFFTASGMDEMAVEFLHELNPFFKVGSGDTNNFPYLEKTA KKGRPMVISSGMQSM DTMKQVYQIVKPLNPFCFLQCTSAYPLQPEDVNLRVISEY QKLFPDIPIGYSGHETGIAISVAVALGAKVLERHITLDTWKGS DHSASLEPGELAE VRSVRLVERALGSPTKQLLPCEMACNEKLGKSVVAKVKIPEGTILTM DMLTVKVGE KGYPPEDIFNLVGKKVLVTVEEDD TIMEELVDNHGKKIKS
Sequence Similarities	Contains 1 AFP-like domain.

GENE INFORMATION

Gene Name	NANS N-acetylneuraminic acid synthase [Homo sapiens]
Official Symbol	NANS
Synonyms	NANS; N-acetylneuraminic acid synthase; sialic acid synthase; SAS;
Gene ID	54187
mRNA Refseq	NM_018946

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Protein Refseq	NP_061819
MIM	605202
Uniprot ID	Q9NR45
Chromosome Location	9p24.1-p23
Pathway	Amino sugar and nucleotide sugar metabolism, organism-specific biosystem; Amino sugar and nucleotide sugar metabolism, conserved biosystem; CMP-N-acetylneuraminate biosynthesis I (eukaryotes), conserved biosystem; Metabolic pathways, organism-specific biosystem; superpathway of sialic acid and CMP-sialic acid biosynthesis, conserved biosystem;
Function	N-acetylneuraminate synthase activity; N-acylneuraminate cytidylyltransferase activity; N-acylneuraminate-9-phosphate synthase activity; transferase activity;