

Recombinant Human NANS

Cat. No. NANS-28782TH **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant full length Human NANS expressed in <i>Saccharomyces cerevisiae</i> ; amino acids 1-359 , 40.3kDa.
Species	Human
ProteinLength	1-359 a.a.
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 <i>E. coli</i> sialic acid synthase gene <i>neuB</i>, and it can partially restore sialic acid synthase activity in an <i>E. coli neuB</i>-negative mutant.
Tissue specificity	Ubiquitous.
Form	Liquid
Purity	Immunogen affinity purified
Storage buffer	Preservative: None Constituents: 30% Glycerol, 0.5% Triton-X-100, 50mM HEPES, 30mM Glutathione, 100mM Sodium chloride, 1mM DTT, pH 7.5

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Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid repeated freeze / thaw cycles.
Sequences of amino acids	MPLELELCPGRWVGGQHPCFIIAEIGQNHQGDLDAKRMIRMAKECGADCAKFQK SELEFKFNRKALERPYTSKHSWG KTYGEHKRHLEFSDQYRELQRYAEEVGIFFTA SGMDE MAVEFLHELNPFFKVGSGDTNNFPYLEKTAKKGRPMV ISSGMQSMDTM KQVYQIVKPLNPFCFLQCTSAYPLQPED VNLRVISEYQKLFPDIPIGYSGHETGIAIS VAAVALGA KVLERHITLDTWKGS DSHSASLEPGELAE LVR SVRLVE RALGSPTKQL LPCEMACNEKLGKSVVAKVKIPEGTILT MDMLTVKVGEPKGYPPEDIFNLVGKKVLV TVEEDDTIMEE LVDNHGKKIKS
Sequence Similarities	Contains 1 AFP-like domain.
Full Length	Full L.
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
Protein Refseq	NP_061819
MIM	605202

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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 cytidyltransferase activity; N-acylneuraminate-9-phosphate synthase activity; transferase activity;

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