

## Product datasheet for RC200123

### NANS (NM\_018946) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NANS (NM_018946) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	NANS
Synonyms:	HEL-S-100; SAS; SEMDCG; SEMDG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC200123 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGCCGCTGGAGCTGGAGCTGTGTCCCGGGCGCTGGGTGGGCGGGCAACACCCGTCTTCATCATTGCCG  
AGATCGGCCAGAACCACCAGGGCGACCTGGATGTAGCCAAGCGCATGATCCGCATGGCCAAGGAGTGTGG  
GGCTGATTGTCCAAGTCCAGAAGAGTGAGCTAGAATCAAGTTAATCGGAAAGCCTGGAGAGGCCA  
TACACCTCGAAGCATTCTGGGGGAAGACGTACGGGGAGCACAACGACATCTGGAGTTCAGCCATGACC  
AGTACAGGGAGCTGCAGAGGTACGCCGAGGAGGTTGGGATCTTCTCACTGCCTCTGGCATGGATGAGAT  
GGCAGTTGAATTCCTGCATGAACTGAATGTTCCATTTTTCAAAGTTGGATCTGGAGACACTAATAATTTT  
CCTTATCTGGAAGACAGCCAAAAAGGTCGCCCAATGGTGATCTCCAGTGGGATGCAGTCAATGGACA  
CCATGAAGCAAGTTTATCAGATCGTGAAGCCCCTCAACCCCAACTTCTGCTTCTTGCAAGTACCAGCGC  
ATACCCGCTCCAGCCTGAGGACGTCAACCTGCGGGTCACTCGGAATATCAGAAGCTCTTTCCTGACATT  
CCCATAGGGTATTCTGGGCATGAAACAGGCATAGCGATATCTGTGGCCGAGTGGCTCTGGGGGCCAAGG  
TGTTGGAACGTACATAACTTTGGACAAGACCTGGAAGGGGAGTGACCACTCGGCCTCGCTGGAGCCTGG  
AGAATGGCCGAGCTGGTGGGTGAGTGGTCTTGTGGAGCGTGCCTGGGCTCCCAACCAAGCAGCTG  
CTGCCCTGTGAGATGGCCTGCAATGAGAAGCTGGGCAAGTCTGTGGTGGCCAAAGTAAAAATTCGGGAAG  
GCACCATTAACAATGGACATGCTCACCGTGAAGGTGGGTGAGCCCAAAGGCTATCCTCCTGAAGACAT  
CTTAATCTAGTGGCAAGAAGTCTGCTGACTGTTGAAGAGGATGACACCATCATGGAAGAATTGGTA  
GATAATCATGGCAAAAAATCAAGTCT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTAA



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**Protein Sequence:** >RC200123 protein sequence  
 Red=Cloning site Green=Tags(s)

MPLELELCPRWVGGQHPFCFIIAEIQNHQGDLDVAKRMIRMAKECGADCAKFQKSELEFKFNRKALERP  
 YTSKHSWGKTYGEHKRHLEFSDQYRELQRYAAEEVGIFFTASGMDEMAVEFLHELNVPPFKVSGDTNMF  
 PYLEKTAKKGRPMVISSGMQSDMTMKQVYQIVKPLNPNFCFLQCT SAYPLQPEDVNLRVISEYQKLFDPDI  
 PIGYSGHETGIAISVAVALGAKVLERHITLTKTWKSDHSASLEPGELAE LVRVRLVERALGSPTKQL  
 LPCEMACNEKLGKSVVAKVKIPEGTILTMDMLTVKVGE PKGYPPEDI FNLVGKKVLVTV EEDDTIMEELV  
 DNHGKKIKS

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6583\\_e09.zip](https://cdn.origene.com/chromatograms/mk6583_e09.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_018946

**ORF Size:** 1077 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**RefSeq:** [NM\\_018946.4](#)

**RefSeq Size:** 1257 bp

**RefSeq ORF:** 1080 bp

**Locus ID:** 54187

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

**Cytogenetics:** 9q22.33

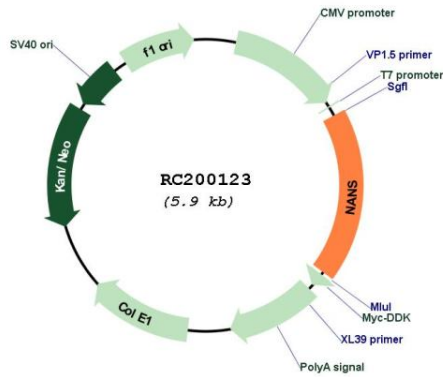
**Domains:** NeuB, Antifreeze

**Protein Pathways:** Amino sugar and nucleotide sugar metabolism, Metabolic pathways

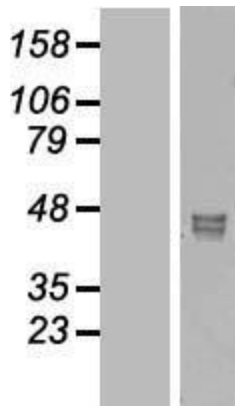
**MW:** 40.3 kDa

**Gene Summary:** 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. [provided by RefSeq, Jul 2008]

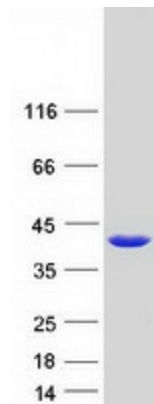
Product images:



Circular map for RC200123



Western blot validation of overexpression lysate (Cat# [LY412808]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC200123 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified NANS protein (Cat# [TP300123]). The protein was produced from HEK293T cells transfected with NANS cDNA clone (Cat# RC200123) using MegaTran 2.0 (Cat# [TT210002]).