

Product datasheet for **RG200123**

NANS (NM_018946) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	NANS (NM_018946) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NANS
Synonyms:	HEL-S-100; SAS; SEMDCG; SEMDG
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG200123 representing NM_018946 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGCCGCTGGAGCTGGAGCTGTGTCCCGGGCGCTGGGTGGGCGGGCAACACCCGTGCTTCATCATTGCCG
AGATCGGCCAGAACCACCAGGGCGACCTGGATGTAGCCAAGCGCATGATCCGCATGGCCAAGGAGTGTGG
GGCTGATTGTGCCAAGTCCAGAAGAGTGAGCTAGAATCAAGTTAATCGGAAAGCCTTGGAGAGGCCA
TACACCTCGAAGCATTCTGGGGGAAGACGTACGGGGAGCACAAACGACATCTGGAGTTCAGCCATGACC
AGTACAGGGAGCTGCAGAGGTACGCCGAGGAGTTGGGATCTTCTCACTGCCTCTGGCATGGATGAGAT
GGCAGTTGAATTCCTGCATGAACTGAATGTTCCATTTTTCAAAGTTGGATCTGGAGACACTAATAATTTT
CCTTATCTGAAAAAGACAGCCAAAAAAGGTCGCCCAATGGTGATCTCCAGTGGGATGCAGTCAATGGACA
CCATGAAGCAAGTTTATCAGATCGTGAAGCCCCTCAACCCCAACTTCTGCTTCTTGCAGTGTACCAGCGC
ATACCCGCTCCAGCCTGAGGACGTCAACCTGCGGGTCACTCGGAATATCAGAAGCTCTTTCCTGACATT
CCCATAGGGTATTCTGGGCATGAAACAGGCATAGCGATATCTGTGGCCGAGTGGCTCTGGGGGCCAAGG
TGTTGGAACGTCACATAACTTTGGACAAGACCTGGAAGGGGAGTGACCACTCGGCCTCGCTGGAGCCTGG
AGAATGGCCGAGCTGGTGGGTGAGTGGTCTTGTGGAGCGTGCCTGGGCTCCCAACCAAGCAGCTG
CTGCCCTGTGAGATGGCCTGCAATGAGAAGCTGGGCAAGTCTGTGGTGGCCAAAGTGAATAATTCGGAAG
GCACATTCTAACAATGGACATGCTCACCGTGAAGGTGGGTGAGCCCAAGGCTATCCTCCTGAAGACAT
CTTAACTAGTGGCAAGAAGTCTGCTGACTGTTGAAGAGGATGACACCATCATGGAAGAATTGGTA
GATAATCATGGCAAAAAAATCAAGTCT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG200123 representing NM_018946
 Red=Cloning site Green=Tags(s)

MPLELELCPGRWVGQHPFCFIIAEIGQNHQGDLDVAKRMIRMAKECGADCAKFQKSELEFKFNKALERP
 YTSKHSWGKTYGEHKRHLEFSDHQYRELQRYAAEEVGIFFTASGMDEMAVEFLHELNVPPFKVGSQDTNMF
 PYLEKTAKKGRPMVISSGMQSDMTMKQVYQIVKPLNPNFCFLQCT SAYPLQPEDVNLRVISEYQKLFDDI
 PIGYSGHETGIAISVAVALGAKVLERHITLTKTWKSDHSASLEPGELAE LVRVRLVERALGSPTKQL
 LPCEMACNEKLGKSVVAKVYKIPGEGTILTMMLTVKVGEPKGYPPEDI FNLVGKKVLTVEEDDTIMEELV
 DNHGKKIKS

TRTRPLE - GFP Tag - V

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_018946.2](#), [NP_061819.2](#)

RefSeq Size: 1170 bp

RefSeq ORF: 1080 bp

Locus ID: 54187

UniProt ID: [Q9NR45](#)

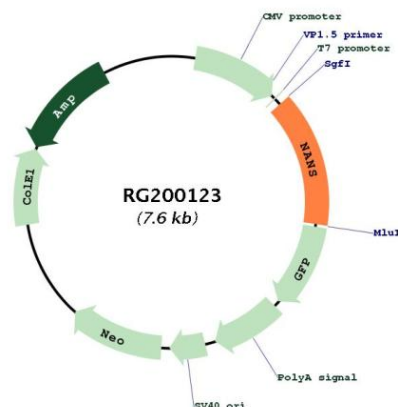
Cytogenetics: 9q22.33

Domains: NeuB, Antifreeze

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

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 RG200123