

## Product datasheet for **SC120003**

### **NAGLU (NM\_000263) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	NAGLU (NM_000263) Human Untagged Clone
Tag:	Tag Free
Symbol:	NAGLU
Synonyms:	CMT2V; MPS-IIIB; MPS3B; NAG; UFHSD
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL4</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_000263, the custom clone sequence may differ by one or more nucleotides

```

ATGGAGGCGGTGGCGGTGGCCGCGGCGGTGGGGTCTTCTCCTGGCCGGGGCCGGGGCGCGGCAGGCG
ACGAGGCCGGGAGGCGGCGCCGTGCGGGCGCTCGTGGCCCGGCTGCTGGGGCCAGGCCCGCGGCCGA
CTTCTCCGTGTCGGTGGAGCGCGCTCTGGCTGCCAAGCCGGGCTTGGACACCTACAGCCTGGGCGGCGGC
GGCGCGGCGCGCGTGC GGTTGCGCGGCTCCACGGGCGTGGCGGCCGCGCGGGGCTGCACCGCTACCTGC
GCGACTTCTGTGGCTGCCACGTGGCCTGGTCCGGCTCTCAGCTGCGCCTGCCGCGCCACTGCCAGCCGT
GCCGGGGAGCTGACCGAGGCCACGCCAACAGGTACCGCTATTACCAGAATGTGTGCACGCAAAGCTAC
TCTTTCGTGTGGTGGGACTGGGCCCGTGGGAGCGAGAGATAGACTGGATGGCGTGAATGGCATCAACC
TGGCACTGGCCTGGAGCGGCCAGGAGGCCATCTGGCAGCGGGTGTACCTGGCCTTGGGCCTGACCCAGGC
AGAGATCAATGAGTTCTTACTGGTCTGCCTTCTGGCCTGGGGCGAATGGGCAACCTGCACACCTGG
GATGGCCCCCTGCCCCCTCTGGCACATCAAGCAGCTTTACCTGCAGCACCGGGTCTGGACCAGATGC
GCTCCTTCGGCATGACCCAGTGTGCCTGCATTGCGGGGCATGTTCCCGAGGCTGTACCAGGGTGT
CCCTCAGTCAATGTACGAAGATGGGCAGTGGGGCCACTTAACTGTTCTACTCCTGTCTCTCCTT
CTGGCTCCGGAAGACCCATATTTCCCATCATCGGGAGCCTTCTCCTGCGAGAGCTGATCAAGAGTTTG
GCACAGACCACATCTATGGGGCCGACACTTTCAATGAGATGCAGCCACCTTCTCAGAGCCCTCCTACCT
TGCCCGAGCCACCCTGCGGTCTATGAGGCCATGACTGCAGTGGATACTGAGGCTGTGTGGCTGTCCAA
GGCTGGCTCTTCCAGCACCAGCCGAGTCTGGGGGCCCGCCAGATCAGGGCTGTGTGGGAGCTGTGC
CCCGTGGCCGCTCCTGGTTCTGGACCTGTTTGTGAGAGCCAGCCTGTGTATACCCGCACTGCCTCCTT
CCAGGGCCAGCCCTTCTCTGGTGCATGCTGCACAACCTTGGGGGAAACCATGGTCTTTTGGAGCCCTA
GAGGCTGTGAACGAGGCCAGCCAGAAGCTGCCCGCTTCCCAACTCCACCATGGTAGGCACGGGCATGG
CCCCGAGGGCATCAGCCAGAACGAAGTGGTCTATTCCCTCATGGCTGAGCTGGGCTGGCGAAAGGACCC
AGTGCCAGATTTGGCAGCCTGGGTGACCAGCTTGGCCGCCGGCGGTATGGGGTCTCCACCCGGACGCA
GGGGCAGCGTGGAGGCTACTGCTCCGGAGTGTGTACAACCTGCTCCGGGGAGGCCTGCAGGGGCCACAATC
GTAGCCCGCTGGTCAGGCGGCCCTCCCTACAGATGAATACCAGCATCTGGTACAACCGATCTGATGTGT
TGAGGCCCTGGCGGCTGCTGCTCACATCTGCTCCCTCCCTGGCCACCAGCCCCGCTTCCGCTACGACCTG
CTGGACCTCACTCGCAGGCAGTGCAGGAGCTGGTCCAGCTTGTACTATGAGGAGGCAAGAAGCGCCTACC
TGAGCAAGGAGCTGGCCTCCCTGTTGAGGGCTGGAGGCGTCTGGCCTATGAGCTGCTGCCGGCACTGGA
CGAGGTGCTGGCTAGTGACAGCCGCTTCTGCTGGCAGCTGGCTAGAGCAGGCCCGAGCAGCGGCAGTC
AGTGAGGCCGAGGCCGATTTCTACGAGCAGAACAGCCGCTACCAGCTGACCTTGTGGGGCCAGAAGGCA
ACATCCTGGACTATGCCAACAAGCAGCTGGCGGGTGGTGGCCAACCTACTACACCCCTCGCTGGCGGCT
TTTCTGGAGGCGCTGGTTGACAGTGTGGCCAGGGCATCCCTTTCCAACAGCACCAGTTTGACAAAAAT
GTCTTCCAACGGAGCAGGCTTCGTTCTCAGCAAGCAGAGGTACCCAGCCAGCCGCGAGGAGACACTG
TGGACCTGGCCAAGAAGATCTTCTCAAATATTACCCCGCTGGGTGGCCGGCTCTTGGTGA
    
```

**5' Read Nucleotide Sequence:**

```
>OriGene 5' read for NM_000263 unedited
CCTGTCAGCATTGTATACGACNACTATAGGCGGCACGCGAATTCGCACCAGCCGAGGA
CTGAGACCATGGAGGCGGTGGCGGTGGCCGCGCGGTGGGGTCTTCTCCTGGCCGGG
CCGGGGGCGCGGCAGGCGACGATGCCCGGGAGGCGGCGGCGTGCGGGCGCTCGTGGCC
GGCTGTGGGGCCAGGCCCGCGGCCGACTTCTCCGTGTGGTGGAGCGCGCTCTGGCTG
CCAAGCCGGGCTTGGACACCTACAGCCTGGGCGGCGGCGGCGCGCGCGTGGGGTGC
GCGGCTCCACGGGCGTGGCGGCCCGCGGGGCTGCACCCTACCTGCGCGACTTCTGTG
GCTGCCACGTGGCTGGTCCGGCTCTCAGCTGCGCCTGCCGCGGCCACTGCCAGCCGTGC
CGGGGGAGCTGACCGAGGCCACGCCAACAGGTACCGCTATTACCAGAATGTGTGCACGC
AAAGCTACTCCTTCGTGTGGTGGGACTGGGCCCGCTGGGAGCGAGAGATAGACTGGATGG
CGTGAAATGGCATCAACCTGGCACTGGCCTGGAGCGGCCAGGATGCCATCTGGCAGCGGG
TGTACCTGGCCTTGGGCTGACCCAGGCAGAGATCAATGAGTTCTTTACTGGTCTCGCT
TCCTGGCCTGGGGCGAATGGGCAACCTGCACACCTGGGATGGCCCCCTGCCCCCTCT
GGCACATCAAGCAGCTNTACCTGCAGCACCGGGTCTGGACCATATGCGCTCCTTCGGCA
TGACCCAGTGTGNCTGCATTCGCGGAGCATGTTCCCGATGCTGTACCAGGGTGTTC
CTCAGTCAATGTACGAAATGGGAGTTGGGGCCACTTTACTGTNCTACNCTGCTCTCC
TTTGGCTCCGGATGACCCATATTCCAT
```

**3' Read Nucleotide Sequence:**

```
>OriGene 3' read for NM_000263 unedited
TTTTGGTTAATTTCTATGNNACCGCGCCGATTCTAGNGATCGATTTTTTTTTTTTTTTT
TTTTAAGTGAAAAGAAAACAGTACTTTAATCCCACACTTTGGGTGGTGGTGGAGGGCAGG
TCATTTCCCTCCAATCCCCCAGGTCAGACCCACCAGCAGGCCGTGGGGCTCTCCCA
GGCCTGGGTTATCCTGTGATGTCTGTCCAGCTCTGGGCCCTGGAATCTGCCTGGAATTA
GCGGAAAACAAGGCCAGTGGTGGCAATCTATACCAAGAGCCGGCCACCCAGCGGGGG
TAATATTTGAGGAAGATCTTCTTGGCCAGGTCCACAGTGTCTCCTCGCGGCTGGCTGGGG
TACCTCTGCTTGCTGAGAACGAAGGCTGCTCCAGTTGGAAGACATTTTTGTCAAATGG
TGCTGTTGAAAGGGATGCCCTGGGCCACACTGTCAACCAGCGCCTCCAGGAAAAGCCGC
CAGCGAGGGGTAGTAGTTGGCCACCAACCCCGCCAGCTGCTTGTGGCATAGTCCAGG
ATGTTGCCTTCTGGCCCCACAAGGTGAGTGGTAGCGGCTGTTCTGCTCGTAGAAATCG
GCCTCGGCTCACTGACTGCCGCTGCTCGGGCTGCTTAGCCAGCTGCCAACAAAGAAG
CGGCTGTTACTAGCCAGCACCTCGTCCAGTGCCGGCAGCAGCTCATAGGCCAAGACGCT
CCAGCCCTCACAAGGGAGGCCAGCTCCTTTGCTAAGTAGGCGCTTCTTGGCTCCCTATAA
AACAAAGCTTGACAACTCCTGCACTGGCTGGCGAATGAAGGTCCACCAGTCTTACCAGAA
GCGGGGGCTTGTGCCACAGGAGGAAACAA
```

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_000263

**Insert Size:**

2300 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_000263.3](#), [NP\\_000254.2](#)

**RefSeq Size:** 2798 bp

**RefSeq ORF:** 2232 bp

**Locus ID:** 4669

**UniProt ID:** [P54802](#)

**Cytogenetics:** 17q21.2

**Domains:** NAGLU

**Protein Families:** Druggable Genome

**Protein Pathways:** Glycosaminoglycan degradation, Lysosome, Metabolic pathways

**Gene Summary:** This gene encodes an enzyme that degrades heparan sulfate by hydrolysis of terminal N-acetyl-D-glucosamine residues in N-acetyl-alpha-D-glucosaminides. Defects in this gene are the cause of mucopolysaccharidosis type IIIB (MPS-IIIB), also known as Sanfilippo syndrome B. This disease is characterized by the lysosomal accumulation and urinary excretion of heparan sulfate. [provided by RefSeq, Jul 2008]