

## Product datasheet for SC120010

### Niemann Pick C1 (NPC1) (NM\_000271) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Niemann Pick C1 (NPC1) (NM_000271) Human Untagged Clone
Tag:	Tag Free
Symbol:	Niemann Pick C1
Synonyms:	NPC; POGZ; SLC65A1
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_000271 edited  
 CCGGCGTCCGACGCTTGGCGGCCACAGCATGACCGCTCGCGGCTGGCCCTTGGCCTC  
 CTCTGTGCTACTGTGTCCAGCGAGGTGTTTTACAGTCTGTGTTTGGTATGGAGAG  
 TGTGGAATTGCATATGGGGACAAGAGGTACAATTGCGAATATTCTGGCCACAAAACCA  
 TTGCCAAAGGATGGATATGACTTAGTGCAGGAAGTCTGTCCAGGATTCTCTTTGGCAAT  
 GTCAGTCTCTGTTGTGATGTTCCGACAGCTTCAGACACTAAAAGACAACCTGCAGTGCCT  
 CTACAGTTTCTGTCCAGATGTCCATCCTGTTTTATAACCTACTGAACCTGTTTTGTGAG  
 CTGACATGTAGCCCTCGACAGAGTCAGTTTTTGAATGTTACAGCTACTGAAGATTATGTT  
 GATCCTGTTACAACCAGACGAAAACAATGTGAAAGAGTTACAATACTACGTCGGACAG  
 AGTTTTGCCAATGCAATGTACAATGCCTGCCGGGATGTGGAGGCCCTCAAGTAATGAC  
 AAGGCCCTGGGACTCCTGTGTGGGAAGGACGCTGACGCCTGTAATGCCACCAACTGGATT  
 GAATACATGTTCAATAAGGACAATGGACAGGCACCTTTTACCATCACTCCTGTGTTTTCA  
 GATTTTCCAGTCCATGGGATGGAGCCCATGAACAATGCCACCAAAAGGCTGTGACGAGTCT  
 GTGGATGAGGTCACAGCACCATGTAGCTGCCAAGACTGCTCTATTGTCTGTGGCCCAAG  
 CCCCAGCCCCACCTCCTCCTGCTCCCTGGACGATCCTTGGCTTGGACGCCATGTATGTC  
 ATCATGTGGATCACCTACATGGCGTTTTTGTCTCCGAGTACACTCCCATCGATAGCAATAGCT  
 TTTTCTGTTAATGCAAGTGACAAAGGAGAGGCGTCTGCTGTGACCCCTGTCAGCGCAGCA  
 TTTGAGGGCTGCTTGGGCGGCTGTTACACGCTGGGGTCTTTCTGCGTCCGAAACCT  
 GGCTGTGTCATTTTCTTCTCGCTGGTCTTCACTACTGCGTGTTCTGTCAGGCCTGGTGTT  
 GTCGGGTGACAACCAATCCAGTTGACCTCTGGTCCAGCCCCAGCAGCCAGGCTCGCCTG  
 GAAAAAGAGTACTTTGACCAGCACTTTGGGCTTTCTTCCGACGGAGCAGCTCATCATC  
 CGGGCCCTCTCACTGACAAACACATTTACCAGCCATACCCTTCCGGAGCTGATGTACCC  
 TTTGGACCTCCGCTTACATACAGATACTGCACCAGGTTCTTGACTTACAAATAGCCATC  
 GAAAACTACTGCCTCTTATGACAATGAGACTGTGACACTTCAAGACATCTGCTTGGCC  
 CCTTTTACCCTATAACACGAACTGCACCATTTTGAAGTGTGTTAAATTACTTCCAGAAC  
 AGCCATTCGCTGCTGGACCACAAGAAAGGGGACGACTTCTTTGTGATGCCGATTACCAC



[View online »](#)

ACGCAC TTTCTG TACTGCGTACGGGCTCCTGCCTCTCTGAATGATACAAGTTTGCTCCAT  
 GACCC TGTGCTGGGTACGTTTGGTGGACCAAGTGTCCCGTGGCTTGTGTTGGGAGGCTAT  
 GATGATCAAACTACAATAACGCCACTGCCCTTGTGATTACCTCCCTGTCAATAATTAC  
 TATAATGATACAGAGAAGCTCCAGAGGGCCAGGCCTGGGAAAAAGAGTTTATTAATTTT  
 GTGAAAACTACAAGAATCCCAATCTGACCATTTCCTTCACTGCTGAACGAAGTATTGAA  
 GATGAAC TAAATCGT GAAAGTGACAGTGATGTCTTACCCTGTGTAATTAGCTATGCCATC  
 ATGTTTCTATATATTTCCCTAGCCTTGGGGCACATCAAAAGCTGTCGACAGGCTTCTGGTG  
 GATTCGAAGGTCTCACTAGGCATCGCGGCATCTTGATCGTGCTGAGCTCGGTGGCTTGC  
 TCCTTGGGTGCTTACAGTACATTGGGTTGCCCTTACCCTCATTGTGATTGAAGTCATC  
 CCGTTCCTGGTGTGGCTGTTGGAGTGGACAACATCTTATTCTGGTGCAGGCCTACCAG  
 AGAGATGAACGTCTTCAAGGGGAAACCCTGGATCAGCAGCTGGGCAGGCTCCTAGGAGAA  
 GTGGCTCCAGTATGTTCTGTCACTCTTTCTGAGACTGTAGCATTCTTCTAGGAGCA  
 TTGTCCGTGATGCCAGCCGTGCACACCTTCTCTCTTTGCGGGATTGGCAGTCTTATT  
 GACTTTCTTCTGCAGATTACCTGTTTCGTGAGTCTTGGGGTTAGACATTAACGTCAA  
 GAGAAAAATCGGCTAGACATCTTTTGTGTGTGAGAGGTCTGAAGATGGAACAAGCGTC  
 CAGGCCTCAGAGAGCTGTTTGTTCGCTTCTTCAAAAACCTCTATTCTCCACTTCTGCTA  
 AAGGACTGGATGAGACCAATTGTGATAGCAATATTTGTGGGTGTTCTGTATTACAGCATC  
 GCAGTCTGAACAAAGTAGATATTGGATTGGATCAGTCTCTTTCGATGCCAGATGACTCC  
 TACATGGTGGATTATTTCAAATCCATCAGTCACTACCTGCATGCGGGTCCGCCTGTGTAC  
 TTTGTCTGGAGGAAGGGCAGACTACACTTCTTCAAGGGGCAGAACATGGTGTGCGGC  
 GGCATGGGCTGCAACAATGATCCCTGGTGCAGCAGATATTTAACGCGGCGCAGCTGGAC  
 AACTATAACCCGAATAGGCTTCGCCCCCTCGTCTGGATCGACGATTATTTGACTGGGTG  
 AAGCCACAGTCTTGTGCTGCGAGTGGACAATCACTGACCAGTTCTGCAATGCTTCA  
 GTGGTTGACCCTGCCTGCGTTTCGCTGCAGGCCTCTGACTCCGGAAGGCAACAGAGGCCT  
 CAGGGGGGAGACTTATGAGATTCTGCCCATGTTCTTTGCGGATAACCTAACCCTAAG  
 TGTGGCAAAGGGGACATGCTGCCTATAGTTCTGCAGTTAACATCCTCTTGGCCATGGC  
 ACCAGGTCGGAGCCACGTACTTCATGACCTACCACACCGTGTGCAGACCTCTGCTGAC  
 TTTATTGACGCTCTGAAGAAAGCCGACTTATAGCCAGTAAATGTCACCGAAACCTAGGGC  
 ATTAACGGCAGTGCCTACCGAGTATTTCTTACAGTGTGTTTTATGTCTTCTACGAACAG  
 TACCTGACCATCATTGACGACACTATCTTCAACCTCGGTGTGCCCTGGGCGGATATTT  
 CTGGTGACCATGGTCTCTGGGCTGTGAGCTCTGGTCTGCAGTATCATGTGTGCCACC  
 ATCGCCATGGTCTTGGTCAACATGTTTGGAGTTATGTGGCTCTGGGGCATCAGTCTGAAC  
 GCTGTATCCTTGGTCAACCTGGTGTGAGCTGTGGCATCTCCGTGGAGTTCTGCAGCCAC  
 ATAACCAGAGCGTTCACGGTGTGAGCATGAAAGGCAGCCGCGTGGAGCGCGGAAGAGGCA  
 CTTGCCACATGGGCAGCTCCGTGTTCACTGGAATCACACTTACAAAATTTGGAGGGATT  
 GTGGTGTGGCTTTTGCCAAATCTCAAATTTCCAGATATTCTACTTCAGGATGTATTTG  
 GCCATGGTCTTACTGGGAGCCACTCACGGATTAATATTTCTCCCTGTCTTACTCAGTTAC  
 ATAGGGCCATCAGTAAATAAAGCCAAAAGTTGTGCCACTGAAGAGCGATACAAAGGAACA  
 GAGCGCAACGGCTTCTAAATTTCTAGCCCTCTGCAGGGCATCCTGACTGAACTGTGTC  
 TAAGGGTTCGGTTCGTTTTACCCTGGACGGGTGCTGCATCGCAAGGCAAGTTGAACACC  
 GGATGGTGCCAACCATCGTTGTTTGGCAGCAGCTTGAACGTAGCGCCTGTGAACTCAG  
 GAATGCACAGTTGACTTGGGAAGCAGTATTACTAGATCTGGAGGCAACCACAGGACACTA  
 AACTTCTCCAGCCTCTTCAAGAAAGAAACCTCATTCTTTGGCAAGCAGGAGGTGACACT  
 AGATGGCTGTGAATGTGATCCGCTCACTGACACTCTGTAAGGCCAATCAATGCACTGTC  
 TGTCTCTCTTTTAGGAGTAAGCCATCCACAAGTTCTATACCATATTTTAGTGACAGT  
 TGAGGTTGTAGATACACTTTATAACATTTTATAGTTTAAAGAGCTTTATTAATGCAATAA  
 ATTAAC TTTGTACACATTTTATATAAAAAACAGCAAGTGATTTCAGAATGTTGTAGGC  
 CTCATTAGAGCTTGGTCTCCAAAATCTGTTTGA AAAAAGCAACATGTTCTTACAGTGT  
 TCCCTAGAAAAGGAGAGATTAATTGCCAGTTAGATGTGGCATGAAATGAGGGACAAAAG  
 AAAGCATCTCGTAGGTGTGTCTACTGGGTTTTAACTTATTTTTCTTAAATAAAATACATT  
 GTTTTCTAAAAA AAAAAAAAAAAAAA

**5' Read Nucleotide Sequence:** >OriGene 5' read for NM\_000271 unedited  
 GCCGCGAATTCGGCACGAGCCGGCGTCCGCAGCCTTGCGCGGCCACAGCATGACCGCTCG  
 CGGCCTGGCCCTTGGCCTCCTCTGCTGCTACTGTGTCCAGCGCAGGTGTTTTACAGTC  
 CTGTGTTTGGTATGGAGAGTGTGGAATTGCATATGGGGACAAGAGGTACAATTGCGAATA  
 TTCTGGCCCAAAAACCATTGCCAAAGGATGGATATGACTTAGTGCAGGAACTGTGCC  
 AGGATTCCTTTGGCAATGTCAGTCTCTGTTGTGATGTTGGCAGCTTCAGACACTAAA  
 AGACAACCTGCAGCTGCCTCTACAGTTTTCTGTCCAGATGCCATCCTGTTTTTAAACCT  
 ACTGAACCTGTTTTGTGAGCTGACATGTAGCCCTCGACAGAGTCAGTTTTTGAATGTTAC  
 AGCTACTGAAGATTATGTTGATCCTGTTACAAACCAGACGAAAACAAATGTGAAAGATT  
 ACAATACTACGTCGGACAGAGTTTTGCCAATGCAATGTACAATGCCTGCCGGGATGTGGA  
 GGCCCCCTCAAGTAATGACAAGGCCCTGGGACTCCTGTGTGGGAAGGACGCTGACGCCTG  
 TAATGCCACCAACTGGATTGAATACATGTTCAATAAGGACAATGGACAGGCACCTTTTAC  
 CATCACTCCTGTGNTTTCAGATTTCCAGTCCATGGGATGGAGCCCATGAACAATGCCAC  
 CN

**3' Read Nucleotide Sequence:** >OriGene 3' read for NM\_000271 unedited  
 TGGACCGCGCCGAATCTANAGTCGAGTTTTTTTTTTTTTTTTTTTAGGAAAACAATGTA  
 TTTTATTAAGAAAAATAAGTTAAAACCCAGTAGACACACCTACGAGATGCTTTCTTTGT  
 CCCTCATTTCATGCCACATCTAACTGGCAATTAATCTCTTCTTCTAGGGGAACACTG  
 TGAAGAACATGTTGCTTTTTTCAAACAGATTTTGGAGACCAAGCTCTAATGAGGCCTAC  
 AACATTCTGAAATCACTTGTGTTTTTTATATAAAAATGTGTACAAAAGTTAATTTATTG  
 CATTAATAAAGCTCTTTAACTATAAAAATGTTATAAAGTGTATCTACAACCTCAACTGTC  
 ACTAAAAATATGGTATAGAACTTGTGGGATGGCTTACTCCTAAAAGGAGAGACAGACAGT  
 GCATTGATTGGCCTTTACAGAGTGTGAGTGCAGTGAGCGGATAACCATTACCAGCCTCTAGTGC  
 CCCTCCTGCTTCCCAAAGAACGAGGCTTTTTTCTCACCAGGCTGCGACAACCTTAGTGT  
 CCTGCGGTGCGCCACATTTACAATACCGCCCCCAGGCCCCCGTTTTCCCTGACTCTC  
 AGGCCCTCCCCCACCCTGCTGCCCCACACCCGATCGGCACCACCACTCGCCCGTCTCC  
 ATGAGCATTTACAACCCTCCCCCTTCTCCCCCTTCCCCCCTTCTCCCCCTTCCCC  
 CCGCCTCCCTCTCCCTTCCCCCGTCCCCCATTCCCTCCCCCTTCTCCCCCTACATCCA  
 TGCCCCCTTTTCTTTTTTCTCCGTCATATTCTCCCCCTCTCTCCCCACCTTTCTCC  
 CCCCTTCCCTCCTCCCTCCCTCCACCCCCCGACAATCGTGCACACCCTCCATATTC  
 TATCCCCCCTCCCATATTCTTCCCCCTCCCCCTCCTCCGTTACCCTCCCTCCATCGCC  
 CCCCCGCTTGTACCGCCACACCACCTTTATCGCACCCCCCTGCCCT

**Restriction Sites:** NotI-NotI

**ACCN:** NM\_000271

**Insert Size:** 4800 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](#)

**OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.

**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\\_000271.1](#), [NP\\_000262.1](#)

**RefSeq Size:** 4673 bp

**RefSeq ORF:** 3837 bp

**Locus ID:** 4864

**UniProt ID:** [O15118](#)

**Cytogenetics:** 18q11.2

**Domains:** Patched

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Lysosome

**Gene Summary:**

This gene encodes a large protein that resides in the limiting membrane of endosomes and lysosomes and mediates intracellular cholesterol trafficking via binding of cholesterol to its N-terminal domain. It is predicted to have a cytoplasmic C-terminus, 13 transmembrane domains, and 3 large loops in the lumen of the endosome - the last loop being at the N-terminus. This protein transports low-density lipoproteins to late endosomal/lysosomal compartments where they are hydrolyzed and released as free cholesterol. Defects in this gene cause Niemann-Pick type C disease, a rare autosomal recessive neurodegenerative disorder characterized by over accumulation of cholesterol and glycosphingolipids in late endosomal/lysosomal compartments.[provided by RefSeq, Aug 2009]