

## Product datasheet for **RG220643**

### **NPC1L1 (NM\_001101648) Human Tagged ORF Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	NPC1L1 (NM_001101648) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	NPC1L1
Synonyms:	LDLCQ7; NPC11L1; SLC65A2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG220643 representing NM_001101648 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGC**C

ATGGCGGAGGCCGGCCTGAGGGGCTGGCTGCTGTGGCCCTGCTCCTGCGCTTGGCCAGAGTGAGCCTT  
ACACAACCATCCACCAGCCTGGCTACTGCGCTTCTATGACGAATGTGGGAAGAACCAGAGCTGTCTGG  
AAGCCTCATGACTCTCCAACGTGTCTGCTGTCCAACACGCCGCCGCAAGATCACAGGTGATCAC  
CTGATCTATTACAGAAGATCTGCCCCGCTCTACACCGCCCCAACACCAAGCTGTCTCCGCCA  
AGCAGCTGGTACTACTGGAAGCGAGTCTGTGATCACCAAGGCCCTCTCACCCGCTGCCAGCCTGCTC  
TGACAATTTGTGAACCTGCACTGCCACAACACGTGCAGCCCCAATCAGAGCCTTTCATCAATGTGACC  
CGCGTGGCCAGCTAGGGGCTGGACAACCTCCAGCTGTGGTGGCCTATGAGGCCTTCTACCAGCATAGCT  
TTGCCGAGCAGAGCTATGACTCCTGCAGCCGTGTGCGCGTCCCTGCAGCTGCCAGCTGGCTGTGGGCAC  
CATGTGTGGCGTGTATGGCTCTGCCCTTTGCAATGCCAGCGCTGGCTCAACTCCAGGGAGACACAGGC  
AATGGTCTGGCCCACTGGACATCACCTCCACCTCTTGAGCCTGGCCAGGCCGTGGGGAGTGGGATTC  
AGCCTCTGAATGAGGGGTTGCACGTTGCAATGAGTCCCAAGGTGACGACGTGGCGACCTGCTCTGCCA  
AGACTGTGCTGCATCCTGTCTGCCATAGCCCCCCCCAGGCCCTCGACTCCACCTTCTACCTGGGCCAG  
ATGCCGGCAGTCTGGTCTCATCATCATCTCTGCTGTCTTTCGCTGTGGTCAACCATCTGCTGTGG  
GATTCGCTGTGGCCCCCGCCAGGGACAAAAGCAAGATGGTGGACCCCAAGAAGGGCACCGCCTCTCTGA  
CAAGCTCAGCTTCTCCACCCACACCCTCCTTGGCCAGTCTTCCAGGGCTGGGGCACGTGGTGGCTTCG  
TGGCCTCTGACCATCTTGGTGTATCTGTATCCCGGTGGTGGCCTTGGCAGCGGCCCTGGTCTTTACAG  
AACTCACTACGGACCCCGTGGAGCTGTGGTCCGCCCAACAGCCAAGCCGGAGTGAGAAAGCTTTCCA  
TGACCAGATTTCCGCCCTTCTCCGAACCAACCAGGTGATCCTGACGGCTCCTAACCGGTCCAGCTAC  
AGGTATGACTCTGTGCTGCTGGGCCCAAGAACTTCAGCGGAATCCTGGACCTGGACTTGTCTGGAGC  
TGCTAGAGCTGCAGGAGAGGCTGCGGCACCTCCAGGTATGGTCCGCCGAAGCACAGCGCAACATCTCCCT  
GCAGGACATCTGCTACGCCCTCAATCCGGACAATACCAGTCTCTACGACTGTGCATCAACAGCCTC



[View online >](#)

CTGCAGTATTTCCAGAACAACCGCACGCTCCTGTCTCACAGCCAACCAGACACTGATGGGGCAGACCT  
CCCAAGTCGACTGGAAGGACCATTTTCTGTACTGTGCCAAATGCCCGCTCACCTTCAAGGATGGCACAGC  
CCTGGCCCTGAGCTGCATGGCTGACTACGGGGCCCTGTCTTCCCTTCCCTTCCATTGGGGGTACAAA  
GGAAAGGACTATTCTGAGGCAGAGGCCCTGATCATGACGTTTCCCTCAACAATTACCCTGCCGGGGACC  
CCCGTCTGGCCCAGGCCAAGCTGTGGGAGGAGGCCCTTAGAGGAAATGCGAGCCTTCCAGCGTCGGAT  
GGCTGGCATGTTCCAGGTCACGTTTATGGCTGAGCGCTCTGTGAAGACGAGATCAATCGCACCACAGCT  
GAAGACTGCCCATCTTTGCCACCAGCTACATTGTCATATTCTGTACATCTCTCTGGCCCTGGGCAGCT  
ATTCCAGCTGGAGCCGAGTGATGGTGGACTCCAAGGCCACGCTGGGCCTCGGCGGGTGGCCGTGGTCT  
GGGAGCAGTCATGGCTGCCATGGCTTCTTCTCCTACTTGGGTATCCGCTCCTCCCTGGTCATCCTGCAA  
GTGGTTCTTTCTGGTGTGTCCGTGGGGGTGATAACATCTTCATCTTTGTTCTCGAGTACCAGAGGC  
TGCCCCGAGGCCCTGGGAGCCACGAGAGGTCCACATTGGGCGAGCCCTAGGCAGGTGGCTCCCAGCAT  
GCTGTTGTGCAGCCTCTCTGAGGCCATCTGCTTCTTCTAGGGCCCTGACCCCCATGCCAGCTGTGCGG  
ACCTTTGCCCTGACCTCTGGCCTGTCAGTATCCTTGACTTCTCCTGCAGATGCAGCCTTTGTGGCC  
TGCTCTCCCTGGACAGCAAGAGGCAGGAGGCCCTCCGGTTGGACGTCTGTGCTGTGTAAGCCCCAGGA  
GCTGCCCCGCCCTGGCCAGGAGAGGGCTCCTGCTTGGCTTCTTCCAAAAGGCTTATGCCCCCTTCTGT  
CTGCACTGGATCACTCGAGGTGTTGTGCTGTGCTGTTTCTCGCCCTGTTGCGAGTGAGCCTCTACTCCA  
TGTGCCACATCAGCGTGGGACTGGACCAGGAGCTGGCCCTGCCAAGGACTCGTACCTGCTTGACTATTT  
CCTCTTTCTGAACCGCTACTTTCGAGGTGGGGGCCCGGTGACTTTGTTACCACCTTGGGCTACAACCTC  
TCCAGCGAGGCTGGGATGAATGCCATCTGCTCCAGTGCAGGCTGCAACAACCTTCTCCTTACCCAGAAGA  
TCCAGTATGCCACAGAGTTCCCTGAGCAGTCTTACCTGGCCATCCTGCCTCCTCCTGGGTGGATGACTT  
CATTGACTGGCTGACCCCGTCTCCTGCTGCCGCTTATATATCTGGCCCCAATAAGGACAAGTTCTGC  
CCCTCGACCGTCAACTCTCTGAAGTGCCTAAAGAACTGCATGAGCATCAGATGGGCTCTGTGAGGCCCT  
CGGTGGAGCAGTCCATAAAGTATCTTCCCTGGTTCCTGAACGACCGGCCAACATCAAATGTCCAAAGG  
CGGCTGGCAGCATACAGCACCTCTGTGAAGTGAAGTTCAGATGGCCAGGTTTTAGCCTCCAGGTTTCATG  
GCCTATCACAAGCCCTGAAAACTCACAGGATTACACAGAAGCTCTGCGGGCAGCTCGAGAGCTGGCAG  
CCAACATCACTGCTGACCTGCGGAAAGTGCCTGGAACAGACCCGGCTTTTGGAGTCTTCCCTACACGAT  
CACCAATGTGTTTTATGAGCAGTACCTGACCATCCTCCCTGAGGGGCTTTCATGCTCAGCCTCTGCCTT  
GTGCCACCTTCGCTGTCTCCTGCCTCCTGCTGGGCTGGACCTGCGCTCCGGCTCCTCAACCTGCTCT  
CCATTGTCATGATCCTCGTGGACACTGTCGGCTTTCATGGCCCTGTGGGCATCAGTTACAATGCTGTGTC  
CCTCATCAACCTGGTCTCGGCGGTGGGCATGTCTGTGGAGTTTGTGCCACATTACCCGCTCCTTTGCC  
ATCAGCACCAAGCCACCTGGCTGGAGAGGGCCAAAGAGGCCACCATCTCTATGGGAAGTGGGTGTTTG  
CAGGTGTGGCCATGACCAACCTGCCTGGCATCCTTGTCTGGGCTCGCCAAGGCCAGCTCATTAGAT  
CTTCTTCTCCGCTCAACCTCCTGATCACTCTGCTGGGCTGCTGCATGGCTTGGTCTTCTGCCCCTC  
ATCCTCAGCTACGTGGGCTGACGTTAACCCGCTCTGGCACTGGAGCAGAAGCGGGCTGAGGAGGCGG  
TGGCAGCAGTCATGGTGGCCTTTGCCAAATCACCCCTCCCGAGTCTCCACAGCTGACAACATCTATG  
CAACCACAGCTTTGAAGGTTCTATCAAAGGTGCTGGTCCATCAGCAACTTCTTGCCCAACATGGGCGG  
CAGTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

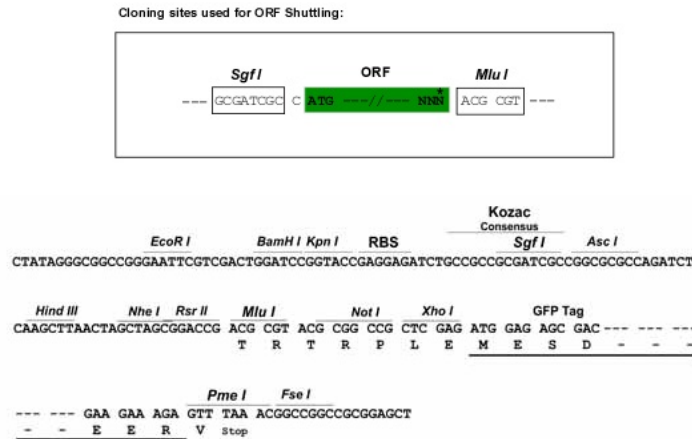
**Protein Sequence:** >RG220643 representing NM\_001101648  
 Red=Cloning site Green=Tags(s)

MAEAGLRGWLLWALLLRLAQSEPYTTIHQPGYCAFYDECCKNPELSGSLMTLSNVSCLSNTPARKITGDH  
 LILLQKICPRLYTGPNQACCSAKQLVSLEASLITKALLTRCPACSDNFVNLHCHNTCSPNQSLFINVT  
 RVAQLGAGQLPAVVAYEAFYQHSFAEQSYDSCSRVRVPAATLAVGTMCGVYGSALCNAQRWLNFGDGTG  
 NGLAPLDITFHLLLEPGQAVGSGIQPLNEGVARCNE SQGDDVATCSCQDCAASCPAARPQALDSTFYLGQ  
 MPGSLVLIILCSVFAVVTILLVGRVAPARDKSKMVDPKKGTSLSDKLSFSTHTLLGQFFQGWGTWVAS  
 WPLTILVLSVIPVVALAAGLVFTELTTDPVELWSAPNSQARSEKAFHDQHFQPFRTNQVILTAPNRSSY  
 RYDSLIIIGPKNFSGILDLDLLELLELQERLRLQVWSPEAQRNLSLQDICYAPLNPDNTSLYDCCINSL  
 LQYFQNNRLLLLTANQTLMGQTSQVDWKDHLFCANAPLTFKDGTLALALSCMADYGAPVFPFLAIGGYK  
 GKDYSEAEALIMTFSLNNYPAGDPRLAQAKLWEEAFLEEMRAFQRRMAGMFQVTFMAERSLEDEINRTTA  
 EDLPIFATSYIVIFLYISLALGSYSSWSRVMVDSKATLGLGGVAVVLGAVMAAMGFFSYLGRSSLVILQ  
 VVPFLVLSVGADNIFIFVLEYQRLPRRPGEPREHVHIGRALGRVAPSMMLCSLSEACFFLGLATPMPAVR  
 TFALTSGLAVILDVLLQMSAFVALLSLDSKRQEASRLDVCCCVKQELPPPQGGEGLLLGGFFQKAYAPFL  
 LHWITRGVLLLLFLALFVSLYSMCHISVGLDQELALPKDSYLLDYFLFLNRYFEVGPVYVFTTLGYNF  
 SSEAGMNAICSSAGCNNSFTQKIYATEFPEQSYLAIPASSWVDDFIDWLTSPSSCCRLYISGPNKDKFC  
 PSTVNSLNLCKNCSITMGSVRPSVEQFHKYLWFLNDRPNIKCPKGGGLAAYSTSVNLTSQGQVLA SRFM  
 AYHKPLKNSQDYTEALRAARELANITADLRKVPGTDPAFEVFPYITINVFYEQYLITLPEGLFMLSCL  
 VPTFAVSCLLGLDLRSGLLNLLSIVMILVDTVGFMALWGISYNAVSLINLVSAGMSVEFVSHITRSFA  
 ISTKPTWLERAKEATISMGSVAVFAGVAMTNLPGILVLGLAKAQLIQIFFFRLNLLITLLGLLHGLVFLPV  
 ILSYVGPDPVNPALALEQKRAEEA AAVMVASCPNHP SRVSTADNIYVNHSEFGSIKAGAGAI SNFLPNNGR  
 QF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

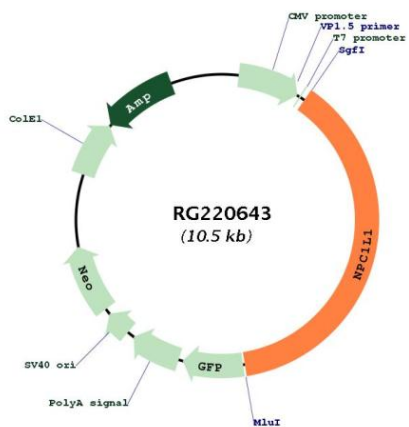


**ACCN:** NM\_001101648

**ORF Size:** 3996 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001101648.2</a>
<b>RefSeq Size:</b>	4985 bp
<b>RefSeq ORF:</b>	3999 bp
<b>Locus ID:</b>	29881
<b>UniProt ID:</b>	<a href="#">Q9UHC9</a>
<b>Cytogenetics:</b>	7p13
<b>Protein Families:</b>	Druggable Genome, Transmembrane
<b>Gene Summary:</b>	The protein encoded by this gene is a multi-pass membrane protein. It contains a conserved N-terminal Niemann-Pick C1 (NPC1) domain and a putative sterol-sensing domain (SSD) which includes a YQRL motif functioning as a plasma membrane to trans-Golgi network transport signal in other proteins. This protein takes up free cholesterol into cells through vesicular endocytosis and plays a critical role in the absorption of intestinal cholesterol. It also has the ability to transport alpha-tocopherol (vitamin E). The drug ezetimibe targets this protein and inhibits the absorption of intestinal cholesterol and alpha-tocopherol. In addition, this protein may play a critical role in regulating lipid metabolism. Polymorphic variations in this gene are associated with plasma total cholesterol and low-density lipoprotein cholesterol (LDL-C) levels and coronary heart disease (CHD) risk. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Oct 2009]

## Product images:



Circular map for RG220643