

## Product datasheet for **RC204766**

### ALG2 (NM\_033087) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ALG2 (NM_033087) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ALG2
Synonyms:	CDG1I; CDGII; CMS14; CMSTA3; hALPG2; NET38
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC204766 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGAGGAGCAGGGCCGGAAACGGGACTCGGTTCCCAAGCCGTCGGTGCTGTTCTCCACCCAGACC  
TGGGCGTGGGCGGCGCTGAGCGGCTGGTGTGGACCGGCGCTGGCGCTGCAGGCGCGGGGTGTAGCGT  
GAAGATCTGGACAGCGCACTACGACCCGGGCACTGTTTCGCCGAGAGCCGCGAGCTACCGGTGCGCTGT  
GCCGGGACTGGCTGCCGCGAGGCTGGCTGGGCGGCCGCGGCCCGCTCGCCCTACGTGCGCA  
TGGTTTTCTGGCGCTCTACGTGCTGTTCTCGCCGACGAGGAGTTCGACGTGGTAGTGCGACCAGGT  
GTCTGCCTGTATCCCAAGTTCAGGCTGGCTAGACGGCGGAAGAAGATCCTATTTACTGTCACTCCCA  
GATCTGCTTCTCACCAAGAGAGATTCTTTCTTAAACGACTATACAGGGCCCAATTGACTGGATAGAGG  
AATACACCACAGGCATGGCAGACTGCATCTTAGTCAACAGCCAGTTCACAGCTGTGTTTTAAGGAAAC  
ATTCAAGTCCCTGTCTCACATAGACCCTGATGTCTCTATCCATCTCTAAATGTCACCAGCTTTGACTCA  
GTTGTTCTGAAAAGCTGGATGACCTAGTCCCAAGGGGAAAAAATTCCTGCTGCTCTCCATCAACAGAT  
ACGAAAGGAAGAAAAATCTGACTTTGGCACTGGAAGCCCTAGTACAGCTGCGTGGAGATTGACATCCCA  
AGATTGGGAGAGGTTTCATCTGATCGTGGCAGGTGTTATGACGAGAGAGTCTGGAGAATGTGGAACAT  
TATCAGGAATTGAAGAAAATGGTCCAACAGTCCGACCTTGCCAGTATGTGACCTTTGAGGCTTTCT  
CAGACAAACAGAAAATCTCCCTCCTCCACAGCTGCACGTGTGTGCTTTACACACCAAGCAATGAGCACTT  
TGGCATTGTCCCTCTGGAAGCCATGTACATGCAGTGCCAGTCATTGCTGTTAATTCGGGTGGACCTTG  
GAGTCCATTGACCACAGTGTACAGGGTTTCTGTGTGAGCCTGACCCGGTGCCTTCTCAGAAGCAATAG  
AAAAGTTCATCCGTGAACCTTCTTAAAAGCCACCATGGGCTGGCTGGAAGAGCCAGAGTGAAGGAAAA  
ATTTTCCCTGAAGCATTACAGAACAGCTCTACCGATATGTTACCAACTGCTGGTA

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >RC204766 protein sequence  
Red=Cloning site Green=Tags(s)

MAEEQGRERDSVPKPSVLFHPDLGVGGAERLVLDAALALQARGCSVKIWTAHYDPGHCFAESRELPVRC  
 AGDWLPRGLGWGGRGAAVCAYVRMVFLALYVFLADEEFDVVCDQVSACIPVFLARRRKKILFYCHFP  
 DLLLTKRDSFLKRLYRAPIDWIEEYTTGMADCILVNSQF TAAVFKETFKSLSHIDPDVL YPSLNVTSFDS  
 VVPEKLDLVPKGGKFLLLSINRYERKKNLTLALEALVQLRGRLT SQDWERVHLIVAGGYDERVLENVEH  
 YQELKKMVQQSDLGQYVTF LRSFSDKQKISLLHSCTCVLYTPSNEHFGIVPLEAMYMQCPVIAVNSGGPL  
 ESIDHSVTGFLCEPDPVHFSEAIEKFIREPSLKATMGLAGRARVKEKFSPEAFTEQLYRYVTKLLV

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6438\\_g04.zip](https://cdn.origene.com/chromatograms/mk6438_g04.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_033087

**ORF Size:** 1248 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_033087.4](#)

**RefSeq Size:** 2834 bp

**RefSeq ORF:** 1251 bp

**Locus ID:** 85365

**UniProt ID:** [Q9H553](#)

**Cytogenetics:** 9q22.33

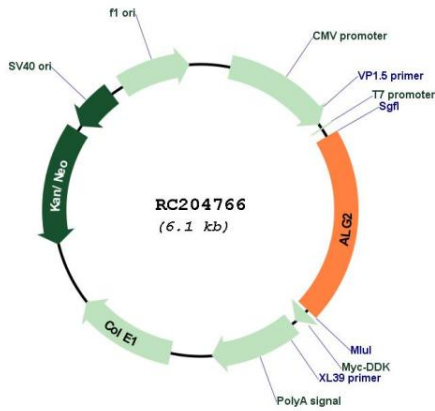
**Domains:** Glycos\_transf\_1

**Protein Pathways:** Metabolic pathways, N-Glycan biosynthesis

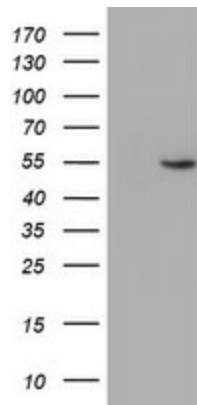
**MW:** 47.1 kDa

**Gene Summary:** This gene encodes a member of the glycosyltransferase 1 family. The encoded protein acts as an alpha 1,3 mannosyltransferase, mannosylating Man(2)GlcNAc(2)-dolichol diphosphate and Man(1)GlcNAc(2)-dolichol diphosphate to form Man(3)GlcNAc(2)-dolichol diphosphate. Defects in this gene have been associated with congenital disorder of glycosylation type 1h (CDG-1h). Alternative splicing results in multiple transcript variants. [provided by RefSeq, Nov 2008]

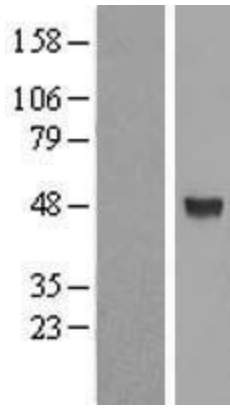
Product images:



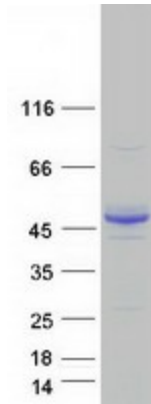
Circular map for RC204766



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ALG2 (Cat# RC204766, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ALG2 (Cat# [TA504242]). Positive lysates [LY409737] (100ug) and [LC409737] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY409737]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC204766 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ALG2 protein (Cat# [TP304766]). The protein was produced from HEK293T cells transfected with ALG2 cDNA clone (Cat# RC204766) using MegaTran 2.0 (Cat# [TT210002]).