

## Product datasheet for **RC203706**

### **GBA2 (NM\_020944) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GBA2 (NM_020944) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GBA2
Synonyms:	AD035; NLGase; SPG46
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC203706 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**GCGATCGCC**

ATGGGGACCCAGGATCCAGGGAACATGGGAACCGCGTCCAGCCTCGGAGCAGATAAGCTGTGCCAAAG  
 AGGATCCACAAGTTTATTGCCCTGAAGAGACTGGCGGCACCAAGGATGTGCAGGTTACAGACTGTAAAGAG  
 TCCCGAAGACAGCCGACCCCAAAAGAGACGGACTGCTGCAATCCGGAGGACTCTGGGCAGCTGATGGTT  
 TCCTATGAGGGTAAAGCTATGGGCTACCAGGTGCCTCCCTTTGGCTGGCGCATCTGTCTGGCTCATGAGT  
 TTACAGAGAAGAGGAAACCCCTTCAAGTAACAACGTCTCCCTAAGCAACATGATAAAGCATATAGGCAT  
 GGGCTTGAGGTACCTGCAGTGGTGTACCAGGAGACCCATGTGGAAAAGAAGACACCTTTCATCGACATG  
 ATCAATTCTGTACCCCTAAGACAGATTTATGGTTGTCCCTTGGGTGGCATCGGGGAGGCACTATTACCC  
 GTGGCTGGAGAGGCCAGTTCTGTCGTTGGCAGCTTAACCTGGAATGTATCAGCACCGGACAGTCATCGC  
 TGACCAATTCACAGTGTGCTCGCTCGGGAAGGGCAGACTGTGTACCAGCAAGTCTGTCCCTGGAGCGC  
 CCAAGTGTCTCCGACGTGGAACCTGGGCCTGTGTGGTACTTTGCTTTCTACCATGCCCTCTATCCCC  
 GAGCCTGGACTGTCTATCAGTTCCTGGCCAGAATGTCACCCCTACCTGCCGTGAGATCACACCCATCTT  
 GCCCATGACTACCAGGACAGCAGCCTGCCTGTAGGAGTCTTTGTGTGGGATGTGGAAAATGAAGGGGAC  
 GAAGCTCTAGATGTGTCCATCATGTTCTCCATGCGGAAATGGACTGGTGGTGGAGACGATGCCCAAGGGG  
 GTTTGTGGAAATGAGCCCTTCTGTCTGGAGCGTAGCGGGGAAACTGTCCGGGGGCTGCTCTGCATCATCC  
 AACCTTCCAACCCCTACACGATGGCTGTGGCTGCACGAGTACGCGCAGCTACCACGGTAACCCACATC  
 ACAGCCTTTGACCCTGACAGCACGGGGCAGCAGGTGTGGCAGGATCTACTTCAGGATGGACAGCTGGACT  
 CTCCCATTGGCCAAAGCACCCCTACGCAGAAAGGAGTAGGCATTGCTGGAGCTGTGTGTTCCAGCAA  
 GTTGCAGACTCGAGGCCAGTGCCGCTGGAGTTTCACTGGCTTGGGACATGCCCAAGGATCATGTTTGGA  
 GCTAAAGGCCAAGTCCACTACAGGCGGTATACAAGTTCTTTGGCCAGGATGGAGATGCAGCACCTGCC  
 TCAGCCACTATGCACTGTGCCGATACGCAGAGTGGGAAGAGAGGATCTCAGCTTGGCAGAGCCCGTATT  
 GGATGACAGATCACTGCCTGCCTGGTACAAATCTGCGCTGTTCAATGAACTATACTTCTGGCTGATGGA  
 GGCACAGTGTGGCTGGAAGTTCTTGAGGACTCCCTACCAGAGGAGCTGGGCAGAAACATGTGTACCTCC  
 GCCCCACCCTACGGGACTACGGTCGATTTGGCTACCTTGAGGGCCAGGAGTACCGCATGTACAACACATA  
 TGATGTCCACTTTATGCTTCTTTGCCCTCATCATGCTCTGGCCAAACTTGAGCTCAGCTACAGTAT  
 GACATGGCTCTGGCCACTCTCAGGGAGGACCTGACACGGCGACGGTACCTGATGAGTGGGGTGTGGCAC  
 CTGTGAAAAGGAGGAACGTCATCCCCATGATATTGGGGACCCAGATGATGAACCATGGCTCCGCGTCAA  
 TGCAATTTAATCCATGATACTGCTGATTGGAAGGACCTGAACCTGAAGTTTGTGCTGCAGGTTTATCGG  
 GACTATTACCTCACGGGTGATCAAACTTCTGAAGGACATGTGGCCTGTGTGTCTAGCTGTGATGGAAT  
 CTGAAATGAAGTTTGACAAGGACCATGATGGACTCATTGAAAATGGAGGCTATGCAGACCAGACCTATGA  
 TGGATGGGTGACCACAGGCCAGTGTACTGTGGAGGGCTGTGGCTGGCAGCTGTGGCTGTGATGGTC  
 CAGATGGCTGCTGTGTGGGGCACAGGACATCCAGGATAAGTTTCTTCTATCCTCAGCCGGGGCCAAG  
 AAGCCTATGAGAGACTGCTGTGGAATGGCCGCTATTAACTATGACAGCAGCTCTCGCCCTCAGTCTCG  
 TAGTGTTATGTCTGACCAGTGTGCTGGACAGTGGTTCTGAAGGCCTGTGGCCTAGGAGAAGGAGACACT  
 GAGGTGTTTCTACCCAACATGTGGTCCGTGCTCTCAAACATCTTTGAGCTGAACGTCCAGGCCCTTG  
 CAGGAGGGGCCATGGGGCTGTGAATGGGATGCAGCCCCATGGTGTCCCTGATAAATCCAGTGTGCAGTC  
 TGATGAAGTCTGGGTGGGTGTGGTCTACGGGCTGGCAGCTACCATGATCCAAGAGGGCCTGACTGGGAG  
 GGCTTCCAGACAGCTGAAGGCTGCTACCGTACCGTGTGGGAGCGCCTGGGTCTGGCTTCCAGACCCAG  
 AGGCATACTGCCAGCAGCGAGTGTCCGCTCACTGGCCTACATGCGGCCACTGAGCATATGGCCATGCA  
 GCTAGCCCTGCAACAGCAGCAGCACAAAAGGCCCTCTGGCCAAAAGTCAAACAGGGCACAGGACTAAGG  
 ACAGGGCCTATGTTTGGACCAAAGGAAGCCATGGCAAACCTGAGCCAGAG

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC203706 protein sequence  
 Red=Cloning site Green=Tags(s)

MGTQDPGNMGTGVPASEQISCAKEDPQVYCPPEETGGTKDVQVTDCKSPEDSRPPKETDCCNPEDSGQLMV  
 SYEGKAMGYQVPPFGWRICLAHEFTEKRKPFQANNVSLSNMIKHIGMLRYLQWYRKTHTVEKTPFIDM  
 INSVPLRQIYGCPGGIGGGTITRGWRGQFCRWQLNPGMYQHRTVIADQFTVCLRREGQTVYQQVLSLER  
 PSVLRSNWGLCGYFAFYHALYPRAWTVYQLPGQNVTLTCRQITPILPHDYQDSSLPGVGFVWDVENEED  
 EALDVSIMFSMRNGLGGDDAPGGLWNEPFCLETSGETVRGLLLHHPTLPNPYTMVAARVTAATTVTHI  
 TAFDPDSTGQQVWQDLLQDQQLDSPGTQSTPTQKGVGIAGAVCVSSKLRPRGQCRLEFLAWDMPRIMFG  
 AKGQVHYRRYTRFFGQDGAAPALSHYALCRYAEWEERISAWQSPVLDLDRSLPAWYKSALFNELYFLADG  
 GTVWLEVLDSLPEELGRNMCHLRPTLRDYGRFGYLEGQEQYRMYNTYDVHFYASFALIMLWPKLELSLQY  
 DMALATLREDLTRRRYLMGVMAPVKRRNVIPHDIGDPDDEPWLRVNAYLIHDTADWKDLNLKFLVQVYR  
 DYYLTGDQNFLLKDMWPVCLAVMESEMKFDKDHDLIENGGYADQTYDQWVTTGPSAYCGGLWLAAVAVMV  
 QMAALCGAQDIQDKFSSILSRGQEAAYERLLWNGRYNYDSSSRPQRSVMSDQCAGQWFLKACGLGEGDT  
 EVFPTQHVVRALQTI FELNVQAFAGGAMGAVNGMQPHGVDPKSSVQSDEVWVGVVYGLAATMIQEGLTWE  
 GFQTAEGCYRTVWERLGLAFQTPEAYCQQRVFRSLAYMRPLSIWAMQLALQQQHKKASWPVKVQGTGLR  
 TGPMFGPKEAMANLSPE

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6251\\_c10.zip](https://cdn.origene.com/chromatograms/mk6251_c10.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



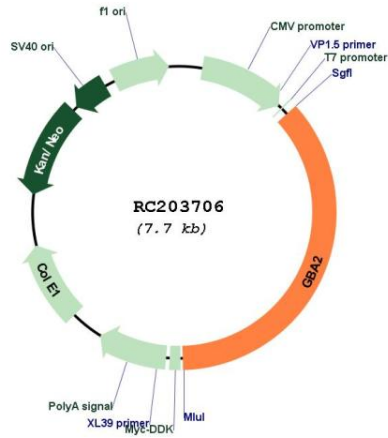
\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_020944

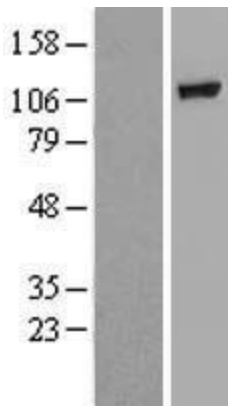
**ORF Size:** 2781 bp

<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_020944.3</a>
<b>RefSeq Size:</b>	3639 bp
<b>RefSeq ORF:</b>	2784 bp
<b>Locus ID:</b>	57704
<b>UniProt ID:</b>	<a href="#">Q9HCG7</a>
<b>Cytogenetics:</b>	9p13.3
<b>Domains:</b>	DUF608
<b>Protein Families:</b>	Druggable Genome
<b>MW:</b>	104.6 kDa
<b>Gene Summary:</b>	This gene encodes a microsomal beta-glucosidase that catalyzes the hydrolysis of bile acid 3-O-glucosides as endogenous compounds. Studies to determine subcellular localization of this protein in the liver indicated that the enzyme was mainly enriched in the microsomal fraction where it appeared to be confined to the endoplasmic reticulum. This putative transmembrane protein is thought to play a role in carbohydrate transport and metabolism. [provided by RefSeq, Jul 2008]

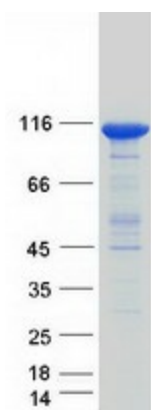
Product images:



Circular map for RC203706



Western blot validation of overexpression lysate (Cat# [LY412192]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC203706 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GBA2 protein (Cat# [TP303706]). The protein was produced from HEK293T cells transfected with GBA2 cDNA clone (Cat# RC203706) using MegaTran 2.0 (Cat# [TT210002]).