

Product datasheet for **RC216061**

GBA (NM_000157) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GBA (NM_000157) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GBA
Synonyms:	GBA1; GCB; GLUC
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC216061 representing NM_000157
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGAGTTTTCAAGTCTTCCAGAGAGGAATGTCCCAAGCCTTTGAGTAGGGTAAGCATCATGGCTGGCA
 GCCTCACAGGATTGCTTCTACTTCAGGCAGTGTGTGGGCATCAGGTGCCCGCCCTGCATCCCTAAAAG
 CTTTCGGCTACAGCTCGGTGGTGTGTGTCTGCAATGCCACATACTGTGACTCCTTTGACCCCCGACCTTT
 CCTGCCCTTGGTACCTTCAGCCGCTATGAGAGTACACGCAGTGGGCGACGGATGGAGCTGAGTATGGGGC
 CCATCCAGGCTAATCACACGGGCACAGGCTGCTACTGACCCTGCAGCCAGAACAGAAAGTCCAGAAAGT
 GAAGGGATTTGGAGGGGCCATGACAGATGCTGCTGCTCTCAACATCCTTGCCTGTCACCCCTGCCCAA
 AATTTGCTACTTAAATCGTACTTCTCTGAAGAAGGAATCGGATATAACATCATCCGGGTACCCATGGCCA
 GCTGTGACTTCTCCATCCGCACCTACACCTATGCAGACACCCCTGATGATTTCCAGTTGCACAACTCAG
 CCTCCAGAGGAAGATACCAAGCTCAAGATACCCCTGATTACCCGAGCCCTGCAGTTGGCCAGCGTCCC
 GTTTCACCTCCTTGCCAGCCCTGGACATCACCCACTTGGCTCAAGACCAATGGAGCGGTGAATGGGAAGG
 GGTCACTCAAGGGACAGCCCGGAGACATCTACCACCAGACCTGGGCCAGATACTTTGTGAAGTTCCTGGA
 TGCCATGCTGAGCACAAGTTACAGTCTGGGCAGTGACAGCTGAAAATGAGCCTTCTGCTGGGCTGTTG
 AGTGGATACCCCTTCCAGTGCCTGGGCTTACCCCTGAACATCAGCGAGACTTCAATGCCCCTGACCTAG
 GTCCTACCCTCGCCAACAGTACTACCACAATGTCGCCCTACTCATGCTGGATGACCAACGCTTGTCTGT
 GCCCACTGGGCAAAGGTGGTACTGACAGACCCAGAAGCAGCTAAATATGTTTCAATGGCATTGCTGTACAT
 TGGTACCTGGACTTTCTGGCTCCAGCCAAAGCCACCCTAGGGGAGACACCCGCTGTTCCCAACACCA
 TGCTCTTTGCCTCAGAGGCTGTGTGGCTCCAAGTTCTGGGAGCAGAGTGTGCGGCTAGGCTCCTGGGA
 TCGAGGGATGCAGTACAGCCACAGCATCATCAAGAACCTCCTGTACCATGTGGTTCGGCTGGACCGACTGG
 AACCTTGCCTGAACCCGAAGGAGGACCAATTGGGTGCGTAACTTTGTCGACAGTCCCATCATTGTAG
 ACATACCAAGGACACGTTTTACAAACAGCCCATGTTCTACCACCTTGGCCACTTCAGCAAGTTCATTCC
 TGAGGGCTCCCAGAGAGTGGGCTGGTTGCCAGTCAAGAAGCAGCTGGACGCAGTGGCACTGATGCAT
 CCCGATGGCTCTGCTGTTGTGGTCTGCTAAACCCTCCTCAAGGATGTGCTCTTACCATCAAGGATC
 CTGCTGTGGGCTCCTGGAGACAATCTCACCTGGCTACTCCATTCACACCTACCTGTGGCGTCGCCAG

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC216061 representing NM_000157
 Red=Cloning site Green=Tags(s)

MEFSSPSREECPKPLSRVSIIMAGSLTGLLLLQAVSWASGARPCIPKSFYSSVVCVNCATYCDSDPPTF
 PALGTFSTRYESTRSGRMELSMGPIQANHTGTGLLLTLQPEQKFQKVKFGGAMTDAALNILALSPPAQ
 NLLLLKSYFSEEGIGYNIIRVPMASCDFSIRTYTYADTPDDFQLHNFSLPEEDTKLKIPLIHRALQLAQRP
 VLLASPWTSPTWLKTNGAVNGKSLKQPGDIYHQTWARYFVKFLDAYAEHKLQFVAVTAENEPSAGLL
 SGYPFQCLGFTPEHQDFIARDLGPTLANSTHNVRLMLDDQRLLLPHWAKVVLTDPEAAKYVHGIADV
 WYLDLFLAPAKATLGETHRLFPNTMLFASEACVGSKFWEQSVRLGSWDRGMQYSHSIIITNLLYHVVGWTDW
 NLALNPEGPNWVRNFVDSPIIVDITKDFYKQPMFYHLGHFSKFIPEGSQRVGLVASQKNDLDAVALMH
 PDGSAVVVVLNRSKDVPLTIKDPVGFLETISPYSIHTYLWRRQ

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6044_b09.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:


ACCN: NM_000157

ORF Size: 1608 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_000157.4](#)

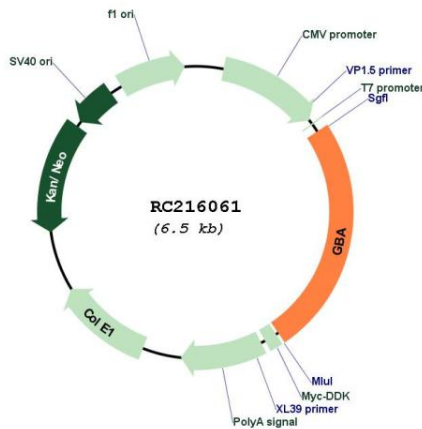
RefSeq Size: 2324 bp

RefSeq ORF: 1611 bp

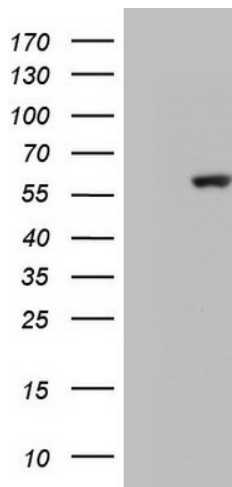
Locus ID: 2629

UniProt ID: [P04062](#)
Cytogenetics: 1q22
Domains: Glyco_hydro_30
Protein Families: Druggable Genome
Protein Pathways: Lysosome, Metabolic pathways, Other glycan degradation, Sphingolipid metabolism
MW: 59.72 kDa
Gene Summary: This gene encodes a lysosomal membrane protein that cleaves the beta-glucosidic linkage of glycosylceramide, an intermediate in glycolipid metabolism. Mutations in this gene cause Gaucher disease, a lysosomal storage disease characterized by an accumulation of glucocerebrosides. A related pseudogene is approximately 12 kb downstream of this gene on chromosome 1. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jan 2010]

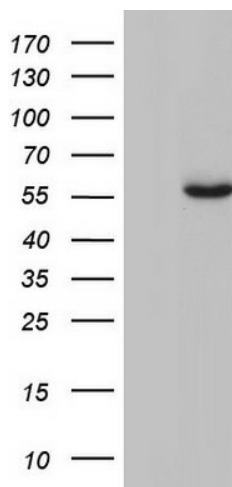
Product images:



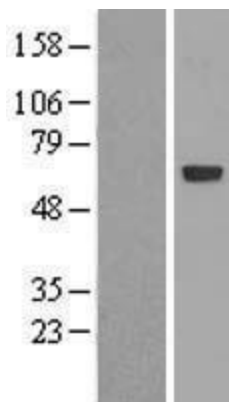
Circular map for RC216061



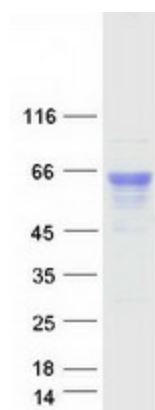
HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY GBA (RC216061, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GBA ([TA803361]). Positive lysates [LY400055] (100ug) and [LC400055] (20ug) can be purchased separately from OriGene.



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GBA (Cat# RC216061, 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-GBA(Cat# [TA803377]). Positive lysates [LY400055] (100ug) and [LC400055] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400055]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC216061 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GBA protein (Cat# [TP316061]). The protein was produced from HEK293T cells transfected with GBA cDNA clone (Cat# RC216061) using MegaTran 2.0 (Cat# [TT210002]).