

## Product datasheet for TP316061

### GBA (NM\_000157) Human Recombinant Protein

#### Product data:

|                                       |                                                                                                                       |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Product Type:                         | Recombinant Proteins                                                                                                  |
| Description:                          | Recombinant protein of human glucosidase, beta; acid (includes glucosylceramidase) (GBA), transcript variant 1, 20 µg |
| Species:                              | Human                                                                                                                 |
| Expression Host:                      | HEK293T                                                                                                               |
| Expression cDNA Clone or AA Sequence: | >RC216061 representing NM_000157<br><b>Red</b> =Cloning site <b>Green</b> =Tags(s)                                    |

MEFSSPSREECPKPLSRVSIIMAGSLTGLLLLQAVSWASGARPCIPKSFYSSVWCVCNATYCDSFDPPTF  
PALGTFSRYESTRSGRRMELSMGPIQANHTGTGLLLTLQPEQKFQKVKGGAMTDAAALNILALSPPAQ  
NLLLKSYFSEEGIGYNIIRVPMASCDFSIRTYTYADTPDDFQLHNFSLPEEDTKLKIPLIHRALQLAQR  
VLLASPWTSPTWLKTNGAVNGKGSKQPGDIYHQTWARYFVKFLDAYAEHKLQFWAVTAENEPSAGL  
L  
SGYPFQCLGFTPEHQRDFIARDLGPTLANSTHHNVRLMLDDQRLLLPHWAKVVLTDPEAAKYVHGIAVH  
WYLDLAPAKATLGETHRLFPNTMLFASEACVGSKFWEQSVRLGSDRGMQYSHSIITNLLYHVVGWTD  
W  
NLALNPEGGPNWVRNFVDSPPIVDITKDTFYKQPMFYHLGHFSKFIPEGSQRVGLVASQKNDLDAVALMH  
PDGSAVVVWLNRSKDVPLTIKDPAVGFLETISPGYSIHTYLWRRQ

**TRTRPLEQKLISEEDLAANDILDYKDDDDKV**

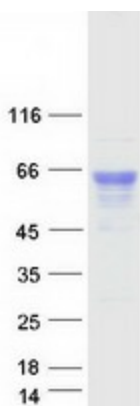
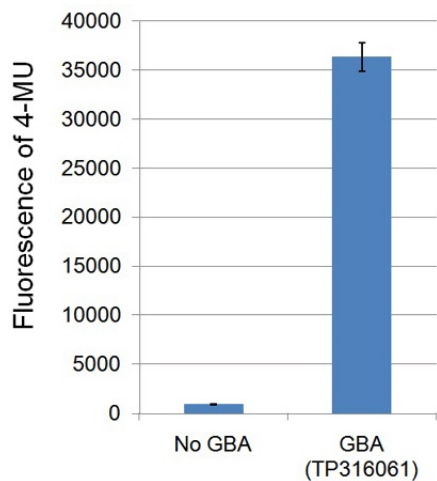
|                |                                                             |
|----------------|-------------------------------------------------------------|
| Tag:           | C-Myc/DDK                                                   |
| Predicted MW:  | 55.5 kDa                                                    |
| Concentration: | >0.05 µg/µL as determined by microplate BCA method          |
| Purity:        | > 80% as determined by SDS-PAGE and Coomassie blue staining |
| Buffer:        | 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol        |



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|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bioactivity:</b>      | The enzymatic activity of TP316061 (GBA) was measured by its ability to hydrolyze a fluorescent substrate 4-methylumbelliferyl- $\beta$ -D-glucopyranoside. The specific activity is > 70,000 pmol/hour/ $\mu$ g, as measured under the following conditions: 27 ng of GBA was incubated with 10 mM 4-methylumbelliferyl- $\beta$ -D-glucopyranoside in the following buffer at 37°C for 40 min: 150 mM citrate-phosphate buffer, pH 5.4, 0.25% (w/w) sodium taurocholate, 0.25% (w/w) Triton X-100, and 1% bovine serum albumin. The reaction was terminated by adding 0.5 volume of 1M glycine buffer, pH 12.5. The hydrolyzed product of reaction, 4-methylumbelliferone (4-MU), was measured using a FlexStation 3 microplate reader (Ex365/Em445). Specific activity of GBA was calculated based on a standard curve of known concentration of 4-MU. |
| <b>Preparation:</b>      | Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Note:</b>             | For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Storage:</b>          | Store at -80°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Stability:</b>        | Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>RefSeq:</b>           | <a href="#">NP_000148</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Locus ID:</b>         | 2629                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>UniProt ID:</b>       | <a href="#">P04062</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>RefSeq Size:</b>      | 2324                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Cytogenetics:</b>     | 1q22                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>RefSeq ORF:</b>       | 1608                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Synonyms:</b>         | GBA1; GCB; GLUC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Summary:</b>          | 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]                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Protein Families:</b> | Druggable Genome                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Protein Pathways:</b> | Lysosome, Metabolic pathways, Other glycan degradation, Sphingolipid metabolism                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Product images:



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]).