

Datasheet for ABIN3092734
GBA2 Protein (AA 1-927) (Strep Tag)



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Overview

Quantity:	1 mg
Target:	GBA2
Protein Characteristics:	AA 1-927
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This GBA2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MGTQDPGNMG TGVPASEQIS CAKEDPQVYC PEETGGTKDV QVTDCKSPED SRPPKETDCC NPEDSGQLMV SYEGKAMGYQ VPPFGWRICL AHEFTEKRKP FQANNVSLSN MIKHIGMGLR YLQWWYRKTH VEKKTPIFDM INSVPLRQIY GCPLGGIGGG TITRGWRGQF CRWQLNPGMY QHRTVIADQF TVCLRREGQT VYQQVLSLER PSVLRSWNWG LCGYFAFYHA LYPRAWTVYQ LPGQNVTLTC RQITPILPHD YQDSSLPGGV FVWDVENEGD EALDVSIMFS MRNGLGGGDD APGGLWNEPF CLERSGETVR GLLLHHPTLP NPYTMAVAAR VTAATTVTHI TAFDPDSTGQ QVWQDLLQDG QLDSPGTGST PTQKGVGIAG AVCVSSKLRP RGQCRLEFSL AWDMPRIMFG AKGQVHYRRY TRFFGQDGDA APALSHYALC RYAEWEERIS AWQSPVLDDR SLPAWYKSAL FNELYFLADG GTVWLEVLED SLPEELGRNM CHLRPTLRDY GRFGYLEGQE YRMYNTYDVH FYASFALIML WPKLELSLQY DMALATLRED LTRRRYLMSG VMAPVKRRNV IPHDIGDPDD EPWLRVNAYL IHDTADWKDL NLKFVLQVYR DYYLTGDQNF LKDMWPVCLA VMESEMKFDD DHDGLIENG YADQTYDGWW TTGPSAYCGG LWLAAVAVMV QMAALCGAQD IQDKFSSILS
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RGQEAYERLL WNGRYNYDS SSRPQSR SVM SDQCAGQWFL KACGLGEGDT EVFPTQHVR
ALQTIFELNV QAFAGGAMGA VNGMQPHGVP DKSSVQSDEV WVG VVYGLAA TMIQEGLTWE
GFQTAEGCYR TVWERLGLAF QTPEAYCQQR VFRSLAYMRP LSIWAMQLAL QQQQHKKASW
PKVKQGTGLR TGPMFGPKEA MANLSPE

Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.

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- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®): 1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE. 2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	GBA2
Alternative Name:	GBA2 (GBA2 Products)
Background:	Non-lysosomal glucosylceramidase (NLGase) (EC 3.2.1.45) (Beta-glucocerebrosidase 2) (Beta-glucosidase 2) (Bile acid beta-glucosidase GBA2) (Bile acid glucosyl transferase GBA2) (Cholesterol glucosyltransferase GBA2) (EC 2.4.1.-) (Cholesteryl-beta-glucosidase GBA2) (EC 3.2.1.-) (Glucosylceramidase 2) (Non-lysosomal cholesterol glycosyltransferase) (Non-lysosomal galactosylceramidase) (EC 3.2.1.46) (Non-lysosomal glucosylceramidase),FUNCTION: Non-lysosomal glucosylceramidase that catalyzes the hydrolysis of glucosylceramides/GlcCers (such as beta-D-glucosyl-(1<->1')-N-acylsphing-4-enine) to free glucose and ceramides (such as N-acylsphing-4-enine) (PubMed:17105727, PubMed:30308956, PubMed:32144204). GlcCers are membrane glycosphingolipids that have a wide intracellular distribution (By similarity). They are the main precursors of more complex glycosphingolipids that play a role in cellular growth, differentiation, adhesion, signaling, cytoskeletal dynamics and membrane properties (By similarity). Involved in the transglucosylation of cholesterol, transfers glucose from GlcCer to cholesterol, thereby modifying its water solubility and biological properties (PubMed:32144204). Under specific conditions, may catalyze the reverse reaction, transferring glucose from cholesteryl-3-beta-D-glucoside to ceramide (such as N-acylsphing-4-enine) (Probable). May play a role in the metabolism of bile acids (PubMed:11489889, PubMed:9111029, PubMed:17080196). Able to

Target Details

hydrolyze bile acid 3-O-glucosides as well as to produce bile acid-glucose conjugates thanks to a bile acid glucosyl transferase activity (PubMed:11489889, PubMed:9111029, PubMed:17080196). Catalyzes the hydrolysis of galactosylceramides/GalCers (such as beta-D-galactosyl-(1<->1')-N-acylsphing-4-enine), as well as the galactosyl transfer between GalCers and cholesterol in vitro with lower activity compared with their activity against GlcCers (PubMed:32144204). {ECO:0000250|UniProtKB:Q69ZF3, ECO:0000269|PubMed:11489889, ECO:0000269|PubMed:17080196, ECO:0000269|PubMed:17105727, ECO:0000269|PubMed:30308956, ECO:0000269|PubMed:32144204, ECO:0000269|PubMed:9111029, ECO:0000305|PubMed:32144204}.

Molecular Weight: 104.6 kDa

UniProt: [Q9HCG7](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.

Handling Advice: Avoid repeated freeze-thaw cycles.

Handling

Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process