Datasheet for ABIN3121590

MGAT3 Protein (AA 1-538) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	MGAT3
Protein Characteristics:	AA 1-538
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This MGAT3 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MKMRRYKLFL MFCMAGLCLI SFLHFFKTLS YVTFPRELAS LSPNLISSFF WNNAPVTPQA SPEPGDPDLL RTPLYSHSPL LQPLSPSKAT EELHRVDFVL PEDTTEYFVR TKAGGVCFKP GTRMLEKPSP GRTEEKTEVS EGSSARGPAR RPMRHVLSSR ERLGSRGTRR KWVECVCLPG WHGPSCGVPT VVQYSNLPTK ERLVPREVPR RVINAININH EFDLLDVRFH ELGDVVDAFV VCDSNFTAYG EPRPLKFREM LTNGTFEYIR HKVLYVFLDH FPPGGRQDGW IADDYLRTFL TQDGVSRLRN LRPDDVFIID DADEIPARDG VLFLKLYDGW TEPFAFHMRK SLYGFFWKQP GTLEVVSGCT MDMLQAVYGL DGIRLRRRQY YTMPNFRQYE NRTGHILVQW SLGSPLHFAG WHCSWCFTPE GIYFKLVSAQ NGDFPRWGDY EDKRDLNYIR SLIRTGGWFD GTQQEYPPAD PSEHMYAPKY LLKNYDQFRY LLENPYREPK STVEGGRQNQ GSDGRSSAVR GKLDTAEG **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.**

Product Details

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.
- 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

Product Details

	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:	MGAT3
Alternative Name:	Mgat3 (MGAT3 Products)
Background:	Beta-1,4-mannosyl-glycoprotein 4-beta-N-acetylglucosaminyltransferase (EC 2.4.1.144) (N-glycosyl-oligosaccharide-glycoprotein N-acetylglucosaminyltransferase III) (GNT-III) (GlcNAc-T III) (N-acetylglucosaminyltransferase III),FUNCTION: It is involved in the regulation of the biosynthesis and biological function of glycoprotein oligosaccharides. Catalyzes the addition of N-acetylglucosamine in beta 1-4 linkage to the beta-linked mannose of the trimannosyl core of N-linked sugar chains, called bisecting N-acetylglucosamine (GlcNAc). It is one of the most important enzymes involved in the regulation of the biosynthesis of glycoprotein oligosaccharides (PubMed:25592972, PubMed:11986323). The addition of this bisecting GlcNAc residue alters not only the composition, but also the conformation of the N-glycan. The introduction of the bisecting GlcNAc residue results in the suppression of further processing and elongation of N-glycans, precluding the formation of beta-1,6 GlcNAc branching, catalyzed by MGAT5 since it is unable to use the bisected oligosaccharide as a substrate (By similarity). Addition of bisecting N-acetylglucosamine to CDH1/E-cadherin modulates CDH1 cell membrane location. Inhibits NeuAc-alpha-2,3-Gal-beta-1,4-GlcNAc- formation which modulates sialylation levels and plays a role in cell migration regulation (By similarity). In brain, addition of bisecting N-acetylglucosamine to BACE1 blocks its lysosomal targeting in response to oxidative stress and further degradation which increases its location to early endosome and the APP cleavage (PubMed:25592972, PubMed:26467158). {ECO:0000250|UniProtKB:Q09327, ECO:0000269|PubMed:11986323, ECO:0000269|PubMed:25592972, ECO:0000269|PubMed:26467158}.
Molecular Weight:	62.0 kDa
UniProt:	Q10470

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