

Datasheet for ABIN3137445

## ANGPTL3 Protein (AA 17-455) (His tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	ANGPTL3
Protein Characteristics:	AA 17-455
Origin:	Mouse
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This ANGPTL3 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA, Crystallization (Crys)

#### Product Details

Sequence: SRVDPDLSSF DSAPSEPKSR FAMLDDVKIL ANGLQLGHG LKDFVHKTKG QINDIFQKLN  
 IFDQSFYDLS LRTNEIKEEE KELRRTTSTL QVKNEEVKNM SVELNSKLES LLEEKALQH  
 KVRAL EEQLT NLILSPAGAQ EHPEVTSLSK FVEQQDNSIR ELLQSVEEQY QLSQQHMQI  
 KEIEKQLRKT GIQEPSENSL SSKSRAPRTT PPLQLNETEN TEQDDLPA DC SAVYNRGEHT  
 SGVYTIKPRN SQGFNVYCDT QSGSPWTLIQ HRKDG SQDFN ETWENYEKGF GRLDGEFWLG  
 LEKIYAIVQQ SNYILRLELQ DWKDSKHVYE YSFHLGSHET NYTLHVAEIA GNIPGALPEH  
 TDLMFSTWNH RAKGQLYCPE SYSGGWWWND ICGENNLNGK YNKPRTKSRP ERRRGYWRP  
 QSRKLYAIKS SKMMLQPTT

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

- Characteristics:
- Made in Germany - from design to production - by highly experienced protein experts.
  - Mouse Angptl3 Protein (raised in E. Coli) purified by multi-step, protein-specific process to

ensure crystallization grade.

- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the ExPASy's protparam tool to determine the absorption coefficient of each protein.

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### Purification:

Two step purification of proteins expressed in bacterial culture:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. 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.

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### Purity:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

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### Sterility:

0.22 µm filtered

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### Endotoxin Level:

Endotoxin has not been removed. Please contact us if you require endotoxin removal.

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### Grade:

Crystallography grade

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## Target Details

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### Target:

ANGPTL3

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### Alternative Name:

Angptl3 ([ANGPTL3 Products](#))

## Target Details

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### Background:

Acts in part as a hepatokine that is involved in regulation of lipid and glucose metabolism (PubMed:11788823, PubMed:12671033). Proposed to play a role in the trafficking of energy substrates to either storage or oxidative tissues in response to food intake (PubMed:26305978). Has a stimulatory effect on plasma triglycerides (TG), which is achieved by suppressing plasma TG clearance via inhibition of LPL activity, the function seems to be specific for the feeding conditions. The inhibition of LPL activity appears to be an indirect mechanism involving recruitment of proprotein convertases PCSK6 and FURIN to LPL leading to cleavage and dissociation of LPL from the cell surface, the function does not require ANGPTL3 proteolytic cleavage but seems to be mediated by the N-terminal domain, and is not inhibited by GPIHBP1 (PubMed:12909640, PubMed:16081640, PubMed:20581395). Can inhibit endothelial lipase, causing increased plasma levels of high density lipoprotein (HDL) cholesterol and phospholipids, the cleaved N-terminal domain is more efficient than the uncleaved proprotein (PubMed:17681148). Can bind to adipocytes to activate lipolysis, releasing free fatty acids and glycerol (By similarity). Suppresses LPL specifically in oxidative tissues which is required to route very low density lipoprotein (VLDL)-TG to white adipose tissue (WAT) for storage in response to food, the function may involve cooperation with circulating, liver-derived ANGPTL8 and ANGPTL4 expression in WAT (PubMed:26305978). Contributes to lower plasma levels of low density lipoprotein (LDL)-cholesterol by a mechanism that is independent of the canonical pathway implicating APOE and LDLR (PubMed:25954050). May stimulate hypothalamic LPL activity (PubMed:25338813). {ECO:0000250|UniProtKB:Q9Y5C1, ECO:0000269|PubMed:11788823, ECO:0000269|PubMed:12671033, ECO:0000269|PubMed:16081640, ECO:0000269|PubMed:17681148, ECO:0000269|PubMed:20581395, ECO:0000269|PubMed:25338813, ECO:0000269|PubMed:25954050, ECO:0000269|PubMed:26305978}, Involved in angiogenesis (PubMed:11877390). Binds to endothelial cells via integrin alpha-V/beta-3 (ITGAV:ITGB3), activates FAK, MAPK and Akt signaling pathways and induces cell adhesion and cell migration (By similarity). May increase the motility of podocytes. Secreted from podocytes, may modulate properties of glomerular endothelial cells involving integrin alpha-V/beta-3 and Akt signaling (By similarity). May induce actin filament rearrangements in podocytes implicating integrin alpha-V/beta-3 and Rac1 activation (PubMed:20633534, PubMed:24294595, PubMed:25710887). Binds to hematopoietic stem cells (HSC) and is involved in the regulation of HSC activity probably implicating down-regulation of IKZF1/IKAROS (PubMed:20959605). {ECO:0000250|UniProtKB:Q9Y5C1, ECO:0000269|PubMed:11877390, ECO:0000269|PubMed:20633534, ECO:0000269|PubMed:20959605, ECO:0000269|PubMed:24294595, ECO:0000269|PubMed:25710887}.

## Target Details

Molecular Weight: 51.7 kDa Including tag.

UniProt: [Q9R182](#)

## 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: Protein has not been tested for activity yet. In cases in which it is highly likely that the recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

## Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value is at the discretion of the manufacturer.

Handling Advice: Avoid repeated freeze-thaw cycles.

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