Datasheet for ABIN3116197

**Sphingomyelin Synthase 1 Protein (SGMS1) (AA 1-419) (rho-1D4 tag)**

### Overview

**Quantity:** 1 mg  
**Target:** Sphingomyelin Synthase 1 (SGMS1)  
**Protein Characteristics:** AA 1-419  
**Origin:** Human  
**Source:** Insect Cells  
**Protein Type:** Recombinant  
**Purification tag / Conjugate:** This Sphingomyelin Synthase 1 protein is labelled with rho-1D4 tag.  
**Application:** ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

### Product Details

**Sequence:**  
MLASTMKEV YYWSPKVVAD WLENAMPEY CEPELEHFTGQ DLINLTQEDF KKPPLCRVSS  
DNGQRLLDMI ETLKMEHHELE AKNGKHANG LNIGVDIPTP DGFSISKIP NGMPNGYRKE  
MIKIPMPELE RSQYPMEWGK TFLAFYALS CFVLLTVMIS VVHERVPPKE VQPLPDFTFF  
DHFNRQWQAF SICEINGMIL VGLWLIQWLL LKYKSIISRR FFCIVGTLYL YRCITMYVTT  
LPVPGMHFNC SPKLFDWEA QLLRIMKLIA GGGLSITGSH NMCGDYLYSG HTVMTLTYL  
FIKEYSPRL WWYHWICWLL SVVGIFICILL AHDHYTVDVV VAYYITTRLF WWYHTMANQQ  
VLKEASQMNL LARVWWYRPF QYFENQVGI VPRSYYHWPFP WPVVHLSRQV KYSRLVNDT  

*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.  
- Human SGMS1 Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
Product Details

- 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 receival 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.

Purification:

Three step purification of membrane proteins expressed in baculovirus infected SF9 insect cells:

1. Membrane proteins are fractioned by ultracentrifugation and subsequently solubilized with different detergents (detergent screen). Samples are analyzed by Western blot.
2. The best performing detergent is used for solubilization and the proteins are purified via their rho1D4 tag via two rho1D4 antibody columns: one DTT resistant, the other one not. Eluate fractions are analyzed by Western blot.
3. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatograph. Eluate fractions are analyzed by SDS-PAGE and Western blot.

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

Sterility: 0.22 μm filtered

Endotoxin Level: Protein is endotoxin-free.

Grade: Crystallography grade
Target Details

Target: Sphingomyelin Synthase 1 (SGMS1)

Alternative Name: SGMS1 (SGMS1 Products)

Background: Sphingomyelin synthases synthesize the sphingolipid, sphingomyelin, through transfer of the phosphatidyl head group, phosphatidylcholine, on to the primary hydroxyl of ceramide. The reaction is bidirectional depending on the respective levels of the sphingolipid and ceramide. Golgi apparatus SMS1 directly and specifically recognizes the choline head group on the substrate, requiring two fatty chains on the choline-P donor molecule in order to be recognized efficiently as a substrate. Major form in macrophages. Required for cell growth in certain cell types such as HeLa cells. Suppresses BAX-mediated apoptosis and also prevents cell death in response to stimuli such as hydrogen peroxide, osmotic stress, elevated temperature and exogenously supplied sphingolipids. May protect against cell death by reversing the stress-inducible increase in levels of proapoptotic ceramide. {ECO:0000269|PubMed:14685263, ECO:0000269|PubMed:17449912}.

Molecular Weight: 50.4 kDa Including tag.

UniProt: Q86VZ5

Pathways: Cellular Response to Molecule of Bacterial Origin

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: 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.
### Handling

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### Images

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