

Datasheet for ABIN3116754

Sphingomyelin Synthase 2 Protein (SGMS2) (AA 1-365) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	Sphingomyelin Synthase 2 (SGMS2)
Protein Characteristics:	AA 1-365
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Sphingomyelin Synthase 2 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MDIETAKLE EHLENQPSDP TNTYARPAEP VEEENKNGNG KPKSLSSGLR KGTKKYPDYI QIAMPTESRN KFPLEWWKTG IAFIYAVFNL VLTTVMITVV HERVPPKELS PPLPDKFFDY IDRVKWAFSV SEINGIILVG LWITQWLFLR YKSIVGRRFC FIIGTLYLYR CITMYVTTLTLP VPGMHFQCAP KLNGDSQAKV QRILRLISGG GLSITGSHIL CGDFLFSGHT VTLTLTYLFI KEYSPRHFWW YHLCIWLLSA AGIICILVAH EHYTIDVIA YYITTRLFWW YHSMANEKNL KVSSQTNFLS RAWWFPIFYF FEKNVQGSIP CCFSWPLSWP PGCFKSSCKK YSRVQKIGED NEKST
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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:
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- 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 Western blot.

Product Details

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:	Sphingomyelin Synthase 2 (SGMS2)
Alternative Name:	SGMS2 (SGMS2 Products)
Background:	<p>Phosphatidylcholine:ceramide cholinephosphotransferase 2 (EC 2.7.8.27) (Sphingomyelin synthase 2),FUNCTION: Sphingomyelin synthase that primarily contributes to sphingomyelin synthesis and homeostasis at the plasma membrane. Catalyzes the reversible transfer of phosphocholine moiety in sphingomyelin biosynthesis: in the forward reaction transfers phosphocholine head group of phosphatidylcholine (PC) on to ceramide (CER) to form ceramide phosphocholine (sphingomyelin, SM) and diacylglycerol (DAG) as by-product, and in the reverse reaction transfers phosphocholine from SM to DAG to form PC and CER. The direction of the reaction appears to depend on the levels of CER and DAG in the plasma membrane (PubMed:14685263, PubMed:17449912, PubMed:17982138, PubMed:18370930). Does not use free phosphorylcholine or CDP-choline as donors (PubMed:14685263). Can also transfer phosphoethanolamine head group of phosphatidylethanolamine (PE) on to ceramide (CER) to form ceramide phosphoethanolamine (CPE) (PubMed:19454763). Regulates receptor-mediated signal transduction via mitogenic DAG and proapoptotic CER, as well as via SM, a structural component of membrane rafts that serve as platforms for signal transduction and protein sorting (PubMed:17449912, PubMed:17982138). To a lesser extent, plays a role in secretory transport via regulation of DAG pool at the Golgi apparatus and its downstream effects on PRKD1 (PubMed:18370930, PubMed:21980337). Required for normal bone matrix mineralization (PubMed:30779713). {ECO:0000269 PubMed:14685263, ECO:0000269 PubMed:17449912, ECO:0000269 PubMed:17982138, ECO:0000269 PubMed:18370930, ECO:0000269 PubMed:19454763, ECO:0000269 PubMed:21980337, ECO:0000269 PubMed:30779713}.</p>
Molecular Weight:	42.3 kDa
UniProt:	Q8NHU3

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies
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Application Details

as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

Comment:

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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.

Storage:

-80 °C

Storage Comment:

Store at -80°C.

Expiry Date:

Unlimited (if stored properly)



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