

Datasheet for ABIN3094277

## SMPD3 Protein (AA 1-655) (Strep Tag)



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### 1 Image

#### Overview

Quantity:	1 mg
Target:	SMPD3
Protein Characteristics:	AA 1-655
Origin:	Human
Source:	Tobacco ( <i>Nicotiana tabacum</i> )
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMPD3 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

#### Product Details

Sequence: MVLYTTPFPN SCLSALHCVS WALIFPCYWL VDRLAASFIP TTYEKRQRAD DPCCLQLLCT  
 ALFTPIYLAL LVASLPFAFL GFLFWSPLQS ARRPYIYSRL EDKGLAGGAA LLSEWKGTGP  
 GKSFCFATAN VCLLPDSLAR VNNLFNTQAR AKEIGQRIRN GAARPQIKIY IDSPTNTSIS  
 AASFSSLVSP QGGDGVARAV PGSIKRTASV EYKGDGGRHP GDEAANGPAS GDPVDSSSPE  
 DACIVRIGGE EGGRPPEADD PVPGGQARNG AGGGPRGQTP NHNQDGDGSG SLGSPSASRE  
 SLVKGRAGPD TSASGEPGAN SKLLYKASVV KAAAARRRRH PDEAFDHEVS AFFPANLDFL  
 CLQEVFDKRA ATKLKEQLHG YFEYILYDVG VYGCQGCCSF KCLNSGLLFA SRYPIIMDVAY  
 HCYPNKCNDL ALASKGALFL KVQVGSTPQD QRIVGYIACT HLHAPQEDSA IRCGQLDLLQ  
 DWLADFRKST SSSSAANPEE LVAFDVVCGD FNFDCSSDD KLEQQHSLFT HYRDPCLGPG  
 GEEKPWAIGT LLDTNGLYDE DVCTPDNLQK VLESEEGRRE YLAFPTSKSS GQKGRKELLK  
 GNRRIDYML HAEGLCPDW KAEVEEFSFI TQLSGLTDHL PVAMRLMVSS GEEEA

**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.**

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### 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
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## Product Details

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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

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Target: SMPD3

Alternative Name: SMPD3 ([SMPD3 Products](#))

Background: Sphingomyelin phosphodiesterase 3 (EC 3.1.4.12) (Neutral sphingomyelinase 2) (nSMase-2) (nSMase2) (Neutral sphingomyelinase II),FUNCTION: Catalyzes the hydrolysis of sphingomyelin to form ceramide and phosphocholine. Ceramide mediates numerous cellular functions, such as apoptosis and growth arrest, and is capable of regulating these 2 cellular events independently. Also hydrolyzes sphingosylphosphocholine. Regulates the cell cycle by acting as a growth suppressor in confluent cells. Probably acts as a regulator of postnatal development and participates in bone and dentin mineralization (PubMed:10823942, PubMed:14741383, PubMed:15051724). Binds to anionic phospholipids (APLs) such as phosphatidylserine (PS) and phosphatidic acid (PA) that modulate enzymatic activity and subcellular location. May be involved in IL-1-beta-induced JNK activation in hepatocytes (By similarity). May act as a mediator in transcriptional regulation of NOS2/iNOS via the NF-kappa-B activation under inflammatory conditions (By similarity). {ECO:0000250|UniProtKB:O35049, ECO:0000250|UniProtKB:Q9JJY3, ECO:0000269|PubMed:10823942, ECO:0000269|PubMed:14741383, ECO:0000269|PubMed:15051724}.

Molecular Weight: 71.1 kDa

UniProt: [Q9NY59](#)

Pathways: [Hormone Transport](#)

## Application Details

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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

## Application Details

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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

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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