

Datasheet for ABIN3081067

Gasdermin A Protein (GSDMA) (AA 1-445) (Strep Tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	Gasdermin A (GSDMA)
Protein Characteristics:	AA 1-445
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Gasdermin A protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence: MTMFENVTRA LARQLNPRGD LTPLDSLIDF KRFHPFCLVL RKRKSTLFWG ARYVRTDYTL
LDVLEPGSSP SDPTDTGNFG FKNMLDTRVE GDVDVPKTVK VKGTAGLSQN STLEVQTLNV
APKALETVQE RKLAADHPFL KEMQDQGENL YVMEVVETV QEVTLERAGK AEACFSLPFF
APLGLQGSIN HKEAVTIPKG CVLAFRVRQL MVKGKDEWDI PHICNDNMQT FPPGEKSGEE
KVILIQASDV GDVHEGFRTL KEEVQRETQQ VEKLSRVGQS SLLSSLSKLL GKKKELQDLE
LALEGALDKG HEVTLEALPK DVLLSKEAVG AILYFVGALT ELSEAQQKLL VKSMEKKILP
VQLKLVESTM EQNFLDKEG VFPLQPELLS SLGDEELTLT EALVGLSGLE VQRSGPQYMW
DPDTLPRLCA LYAGLSLLQQ LTKAS

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:	Gasdermin A (GSDMA)
Alternative Name:	GSDMA (GSDMA Products)
Background:	<p>Gasdermin-A (Gasdermin-1) [Cleaved into: Gasdermin-A, N-terminal (GSDMA-NT), Gasdermin-A, C-terminal (GSDMA-CT)],FUNCTION: [Gasdermin-A]: This form constitutes the precursor of the pore-forming protein and acts as a sensor of infection: upon infection by S.pyogenes, specifically cleaved by S.pyogenes effector protein SpeB in epithelial cells, releasing the N-terminal moiety (Gasdermin-A, N-terminal) that binds to membranes and forms pores, triggering pyroptosis. {ECO:0000269 PubMed:27281216, ECO:0000269 PubMed:35110732, ECO:0000269 PubMed:35545676}., FUNCTION: [Gasdermin-A, N-terminal]: Pore-forming protein that causes membrane permeabilization and pyroptosis (PubMed:17471240, PubMed:27281216, PubMed:35110732, PubMed:35545676). Released upon cleavage by S.pyogenes effector protein SpeB, and binds to membrane inner leaflet lipids (PubMed:27281216, PubMed:35110732, PubMed:35545676). Homooligomerizes within the membrane and forms pores of 10-15 nanometers (nm) of inner diameter, triggering pyroptosis (PubMed:27281216, PubMed:35110732, PubMed:35545676). Pyroptosis triggers the elimination of the infected skin cell, depriving the pathogen of its protective niche, while inducing an inflammatory response (PubMed:35110732, PubMed:35545676). This ultimately prevents bacterial penetration of the epithelial barrier and a subsequent systemic dissemination of the pathogen (PubMed:35110732, PubMed:35545676). Binds to cardiolipin and other acidic phospholipids, such as phosphatidylserine, which mediate its targeting to the inner leaflet membrane (PubMed:27281216, PubMed:35110732). {ECO:0000269 PubMed:17471240, ECO:0000269 PubMed:27281216, ECO:0000269 PubMed:35110732, ECO:0000269 PubMed:35545676}.</p>
Molecular Weight:	49.4 kDa
UniProt:	Q96QA5

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:	<p>ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from <i>Nicotiana tabacum</i> 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.</p> <p>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!</p>
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