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Datasheet for ABIN3095715

## STING/TMEM173 Protein (AA 137-379) (His tag)

### Overview

Quantity:	1 mg
Target:	STING/TMEM173 (TMEM173)
Protein Characteristics:	AA 137-379
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This STING/TMEM173 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

### Product Details

Sequence: KGLAPAEISA VCEKGNFNVA HGLAWSYYIG YLRLLPELQ ARIRTYNQHY NNLLRGAVSQ  
RLYILLPLDC GVPDNLMSAD PNIRFLDKLP QQTGDHAGIK DRVYSNSIYE LLENGQRAGT  
CVLEYATPLQ TLFAMSQYSQ AGFSREDRL E QAKLFCRTLE DILADAPESQ NNCRLIAYQE  
PADDSSFSL S QEVLRHRLRQE EKEEVTVGSL KTSAVPSTST MSQEPellis GMEKPLPLRT DFS

**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 TMEM173 Protein (raised in Insect Cells) 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.

## Product Details

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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 baculovirus infected SF9 insect cells: <ol style="list-style-type: none"><li>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.</li><li>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.</li></ol>
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

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## Target Details

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Target:	STING/TMEM173 (TMEM173)
Alternative Name:	TMEM173 ( <a href="#">TMEM173 Products</a> )
Background:	Facilitator of innate immune signaling that acts as a sensor of cytosolic DNA from bacteria and viruses and promotes the production of type I interferon (IFN-alpha and IFN-beta). Innate immune response is triggered in response to non-CpG double-stranded DNA from viruses and

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## Target Details

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bacteria delivered to the cytoplasm. Acts by recognizing and binding cyclic di-GMP (c-di-GMP), a second messenger produced by bacteria, and cyclic GMP-AMP (cGAMP), a messenger produced in response to DNA virus in the cytosol: upon binding of c-di-GMP or cGAMP, autoinhibition is alleviated and TMEM173/STING is able to activate both NF-kappa-B and IRF3 transcription pathways to induce expression of type I interferon and exert a potent anti-viral state. May be involved in translocon function, the translocon possibly being able to influence the induction of type I interferons. May be involved in transduction of apoptotic signals via its association with the major histocompatibility complex class II (MHC-II). Mediates death signaling via activation of the extracellular signal-regulated kinase (ERK) pathway. Essential for the induction of IFN-beta in response to human herpes simplex virus 1 (HHV-1) infection. Exhibits 2',3' phosphodiester linkage-specific ligand recognition. Can bind both 2'-3' linked cGAMP and 3'-3' linked cGAMP but is preferentially activated by 2'-3' linked cGAMP (PubMed:26300263). {ECO:0000269|PubMed:18724357, ECO:0000269|PubMed:18818105, ECO:0000269|PubMed:19433799, ECO:0000269|PubMed:19776740, ECO:0000269|PubMed:21074459, ECO:0000269|PubMed:21947006, ECO:0000269|PubMed:23027953, ECO:0000269|PubMed:23258412, ECO:0000269|PubMed:23707065, ECO:0000269|PubMed:23722158, ECO:0000269|PubMed:26229117, ECO:0000269|PubMed:26300263}.

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Molecular Weight: 28.2 kDa Including tag.

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UniProt: [Q86WV6](#)

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Pathways: [Activation of Innate immune Response](#)

## 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 guarantee though.

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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.

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Restrictions: For Research Use only

## Handling

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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)