Datasheet for ABIN3116214

STING/TMEM173 Protein (AA 1-379) (rho-1D4 tag)

3 Images

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Overview

Quantity:	1 mg
Target:	STING/TMEM173 (TMEM173)
Protein Characteristics:	AA 1-379
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This STING/TMEM173 protein is labelled with rho-1D4 tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	MPHSSLHPSI PCPRGHGAQK AALVLLSACL VTLWGLGEPP EHTLRYLVLH LASLQLGLLL NGVCSLAEEL RHIHSRYRGS YWRTVRACLG CPLRRGALLL LSIYFYYSLP NAVGPPFTWM LALLGLSQAL NILLGLKGLA PAEISAVCEK GNFNVAHGLA WSYYIGYLRL ILPELQARIR TYNQHYNNLL RGAVSQRLYI LLPLDCGVPD NLSMADPNIR FLDKLPQQTG DHAGIKDRVY SNSIYELLEN GQRAGTCVLE YATPLQTLFA MSQYSQAGFS REDRLEQAKL FCRTLEDILA DAPESQNNCR LIAYQEPADD SSFSLSQEVL RHLRQEEKEE VTVGSLKTSA VPSTSTMSQE PELLISGMEK PLPLRTDFSG SSGTETSQVA PA
Specificity:	C-terminal Rho1D4-tag
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).

Product Details

	This made-to-order protein has already been successfully produced. Please let us know if you are interested in purchasing a smaller amount of this protein. We will check our stock and make you a customized quote in case we can provide this protein in a smaller amount.. 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:	STING/TMEM173 (TMEM173)
Alternative Name:	TMEM173 (TMEM173 Products)
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 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

Target Details

	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}.
Molecular Weight:	43.4 kDa Including tag.
UniProt:	Q86WV6
Pathways:	Activation of Innate immune Response

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 gurantee 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

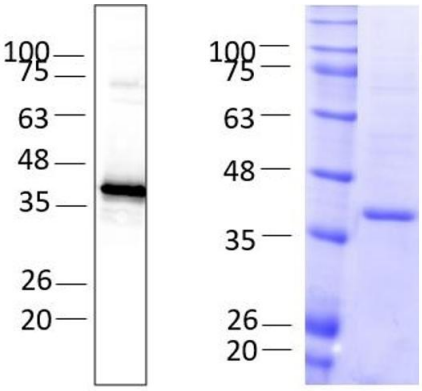
Handling

Format:	Liquid
Buffer:	20 mM Hepes, pH 8.0; 150 mM NaCl; 0,25 % LDAO + Protease inhibitors

Handling

Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	Unlimited (if stored properly)

Images

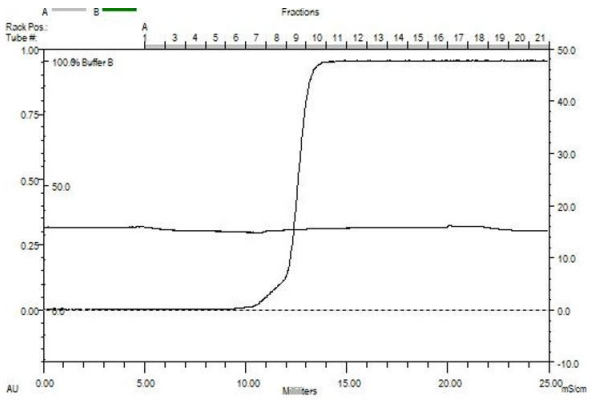


TMEM173 (AA 1-379), Fractions 12,13

Western Blotting

Image 1.

Image 2. „Crystallography Grade“ protein due to multi-step, protein-specific purification process



TMEM173 (AA 1-379), gel filtration Superose 6 in presence of protease inhibitors, fraction 12 and 13 identified with western blot

Size-exclusion chromatography-High Pressure Liquid Chromatography
Image 3.

