

Datasheet for ABIN3096362

Villin 1 Protein (VIL1) (AA 2-827) (His tag)[Go to Product page](#)**1** Image

Overview

Quantity:	1 mg
Target:	Villin 1 (VIL1)
Protein Characteristics:	AA 2-827
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This Villin 1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	TKLSAQVKGS LNITTPGLQI WRIEAMQMVP VPSSTFGSFF DGDCYILAI HKTASSLSYD IHYWIGQDSS LDEQGAAIY TTQMDDFLKG RAVQHREVQG NESEAFRGYF KQGLVIRKGG VASGMKHAVET NSYDVQRLH VKGKRNWVAG EVEMSWKSFN RGDVFLDLG KLIQWNGPE STRMERLRGM TLAKEIRDQE RGGRTYVGWV DGENELASPK LMEVMNHVLG KRRELKAAVP DTVVEPALKAL KLYHVSDS EGNLVVREVA TRPLTQDLLS HEDCYILDQG GLKIYVWKGK KANEQEKKG MSHALNFIKA KQYPPSTQVE VQNDGAESAV FQQLFQKQWTA SNRTSGLGKT HTVGSVAKVE QVKFDATSMH VKPQVAAQK MVDDGSGEVQ VWRIENLELV PVDSKWLGHF YGGDCYLLLY TYLIGEKQHY LLYVWQGSQA SQDEITASAY QAVILDQKYN GEPVQIRVPM GKEPPHLSI FKGRMVVYQG GTSRTNNLET GPSTRLFQVQ GTGANNTKAF EVPARANFLN SNDVFVLKTQ SCCYLWCGKG CSGDEREMAK MVADTISRTE KQVVVEGQEP ANFWMALGGK APYANTKRLQ EENLVITPRL FECSNKTGRF LATEIPDFNQ DDLEEDDVFL LDVWDQVFFW IGKHANEEEEK KAAATTAQEQY LKTHPSGRDP ETPIIVVKQG HEPPTFTGWF LAWDPFKWSN
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TKSYEDLKAE LGNSRDWSQI TAEVTSPKVD VFNANSNLSS GPLPIFPLEQ LVNKPVEELP
EGVDPSRKEE HLSIEDFTQA FGMTPAAFS A LPRWKQQLK KEKGLF

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 VIL1 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.

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.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

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.
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:

>95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility:

0.22 µm filtered

Endotoxin Level:

Protein is endotoxin free.

Product Details

Grade: Crystallography grade

Target Details

Target: Villin 1 (VIL1)

Alternative Name: VIL1 ([VIL1 Products](#))

Background: Epithelial cell-specific Ca(2+)-regulated actin-modifying protein that modulates the reorganization of microvillar actin filaments. Plays a role in the actin nucleation, actin filament bundle assembly, actin filament capping and severing. Binds phosphatidylinositol 4,5-bisphosphate (PIP2) and lysophosphatidic acid (LPA), binds LPA with higher affinity than PIP2. Binding to LPA increases its phosphorylation by SRC and inhibits all actin-modifying activities. Binding to PIP2 inhibits actin-capping and -severing activities but enhances actin-bundling activity. Regulates the intestinal epithelial cell morphology, cell invasion, cell migration and apoptosis. Protects against apoptosis induced by dextran sodium sulfate (DSS) in the gastrointestinal epithelium. Appears to regulate cell death by maintaining mitochondrial integrity. Enhances hepatocyte growth factor (HGF)-induced epithelial cell motility, chemotaxis and wound repair. Upon *S.flexneri* cell infection, its actin-severing activity enhances actin-based motility of the bacteria and plays a role during the dissemination.

{ECO:0000269|PubMed:11500485, ECO:0000269|PubMed:14594952, ECO:0000269|PubMed:15084600, ECO:0000269|PubMed:15272027, ECO:0000269|PubMed:15342783, ECO:0000269|PubMed:16921170, ECO:0000269|PubMed:17182858, ECO:0000269|PubMed:17229814, ECO:0000269|PubMed:17606613, ECO:0000269|PubMed:18054784, ECO:0000269|PubMed:18198174, ECO:0000269|PubMed:19808673, ECO:0000269|PubMed:3087992}.

Molecular Weight: 93.5 kDa Including tag.

UniProt: [P09327](#)

Pathways: [EGFR Signaling Pathway](#), [Regulation of Actin Filament Polymerization](#)

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 guarantee though.

Comment: In cases in which it is highly likely that the recombinant protein with the default tag will be

Application Details

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:	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)

Images



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