

Datasheet for ABIN3095804
VCP Protein (AA 2-806) (His tag)[Go to Product page](#)

1 Image

Overview

Quantity:	1 mg
Target:	VCP
Protein Characteristics:	AA 2-806
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This VCP protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA, Crystallization (Crys)

Product Details

Sequence:	ASGADSKGDD LSTAILKQKN RPNRLIVDEA INEDNSVVSL SQPKMDELQL FRGDTVLLKG KKRREAVCIV LSDDTCSDEK IRMNRVVRNN LRVRLGDVIS IQPCPDVKYG KRIHVLPIDD TVEGITGNLF EVYLKPYFLE AYRPIRKGDI FLVRGGMRV EFKVVETDPS PYCIVAPDTV IHCEGEPIKR EDEEESLNEV GYDDIGGCRK QLAQIKEMVE LPLRHPALFK AIGVKPPRGI LLYGPPGTGK TLIARAVANE TGAFFFLING PEIMSKLAGE SESNLRKAFE EAEKNAPAI FIDELDAIAP KREKTHGEVE RRIVSLLTL MDGLKQRAHV IVMAATNRPN SIDPALRRFG RFDREVDIGI PDATGRLEIL QIHTKNMKLA DDVDLEQVAN ETHGHVGADL AALCSEALQ AIRKKMDLID LEDETIDAEV MNSLAVTMDD FRWALSQSNP SALRETVVEV PQVTWEDIGG LEDVKRELQE LVQYPVEHPD KFLKFGMTPS KGVLFYGPFG CGKTLLAKAI ANECQANFIS IKGPELLTMW FGESEANVRE IFDKARQAAP CVLFFDELDS IAKARGGNIG DGGGAADRV NQILTEMDGM STKKNVFIIG ATNRPDIIDP AILRPGRLDQ LIYIPLPEK SRVAILKANL RKSPVAKDVD LEFLAKMTNG FSGADLTEIC QRACKLAIRE SIESEIRRER ERQTNPSAME
-----------	--

VEEDDPVPEI RRDHFEEAMR FARRSVSDND IRKYEMFAQT LQQSRGFGSF RFPSGNQGGG
GPSQGSGGGT GGSVYTEDND DDLYG

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 VCP 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: VCP

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

Background: Necessary for the fragmentation of Golgi stacks during mitosis and for their reassembly after mitosis. Involved in the formation of the transitional endoplasmic reticulum (tER). The transfer of membranes from the endoplasmic reticulum to the Golgi apparatus occurs via 50-70 nm transition vesicles which derive from part-rough, part-smooth transitional elements of the endoplasmic reticulum (tER). Vesicle budding from the tER is an ATP-dependent process. The ternary complex containing UFD1L, VCP and NPLOC4 binds ubiquitinated proteins and is necessary for the export of misfolded proteins from the ER to the cytoplasm, where they are degraded by the proteasome. The NPLOC4-UFD1L-VCP complex regulates spindle disassembly at the end of mitosis and is necessary for the formation of a closed nuclear envelope. Regulates E3 ubiquitin-protein ligase activity of RNF19A. Component of the VCP/p97-AMFR/gp78 complex that participates in the final step of the sterol-mediated ubiquitination and endoplasmic reticulum-associated degradation (ERAD) of HMGCR. Also involved in DNA damage response: recruited to double-strand breaks (DSBs) sites in a RNF8- and RNF168-dependent manner and promotes the recruitment of TP53BP1 at DNA damage sites. Recruited to stalled replication forks by SPRTN: may act by mediating extraction of DNA polymerase eta (POLH) to prevent excessive translesion DNA synthesis and limit the incidence of mutations induced by DNA damage. Required for cytoplasmic retrotranslocation of stressed/damaged mitochondrial outer-membrane proteins and their subsequent proteasomal degradation. {ECO:0000250|UniProtKB:P46462, ECO:0000269|PubMed:15456787, ECO:0000269|PubMed:16168377, ECO:0000269|PubMed:21118995, ECO:0000269|PubMed:22020440, ECO:0000269|PubMed:22120668, ECO:0000269|PubMed:22607976, ECO:0000269|PubMed:23042605, ECO:0000269|PubMed:23042607}.

Molecular Weight: 90.1 kDa Including tag.

UniProt: [P55072](#)

Pathways: [ER-Nucleus Signaling](#), [Positive Regulation of Endopeptidase Activity](#), [Ubiquitin Proteasome Pathway](#)

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 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