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Datasheet for ABIN3096282

## VPRBP Protein (AA 1-1507) (His tag)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	VPRBP
Protein Characteristics:	AA 1-1507
Origin:	Human
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This VPRBP protein is labelled with His tag.
Application:	Western Blotting (WB), Crystallization (Crys), ELISA, SDS-PAGE (SDS)

#### Product Details

Sequence: MTTVVVHVDS KAEL TTLLEQ WEKEHGSGQD MVPILTRMSQ LIEKETEEYR KGDPDPFDDR  
 HPGRADPECM LGHLLRILFK NDDFMNALVN AYVMTSREPP LNTAACRLLL DIMPGLETAV  
 VFQEKEGIVE NLFKWAREAD QPLRTYSTGL LGGAMENQDI AANYRDENSQ LVAIVLRRLR  
 ELQLQEVALR QENKRPSRK LSSEPLLPLD EEAVDMDYGD MAVDVVDGDQ EEASGDMEIS  
 FHLD SGHKTS SRVNSTTKPE DGGLKKNKSA KQGDRENFRK AKQKLGFSSS DPDRMFVELS  
 NSSWSEMSPW VIGTNYTLYP MTPAIEQRLLI LQYLTPLGEY QELLPIFMQL GSRELMMFYI  
 DLKQTNDVLL TFEALKHLAS LLLHNKFATE FVAHGGVQKL LEIPRPSMAA TGVSMCLYYL  
 SYNQDAMERV CMHPHNVLSD VVNYTLWLME CSHASGCCHA TMFFSICFSF RAVLELFDRY  
 DGLRRLVNLI STLEILNLED QGALLSDEI FASRQTGKHT CMALRKYFEA HLAIKLEQVK  
 QSLQRTEGGI LVHPQPPYKA CSYTHEQIVE MMEFLIEYGP AQLYWEPAEV FLKLSCVQLL  
 LQLISIACNW KTYEARNDTV RFALDVLAIL TVVPKIQQL AESVDVLDEA GSTVSTVGIS  
 IILGVAEGEF FIHDAEIQKS ALQIIINCVC GPDNRISIG KFISGTPRRK LPQNPKSSEH

TLAKMWNVVQ SNNGIKVLIS LLSIKMPITD ADQIRALACK ALVGLSRSSST VRQIISKLPL  
FSSCQIQQLM KEPVLQDKRS DHVKFCKYAA ELIERVSGKP LLIGTDVSLA RLQKADVVAQ  
SRISFPEKEL LLLIRNHLIS KGLGETATVL TKEADLPMTA ASHSSAFTPV TAAASPVSLP  
RTPRIANGIA TRLGSHAAVG ASAPSAPTAH PQPRPPQGPL ALPGPSYAGN SPLIGRISFI  
RERPSPCNGR KIRVLRQKSD HGAYSQSPAI KKQLDRHLPS PPTLDSIITE YLREQHARCK  
NPVATCPPFS LFTPHQCPEP KQRRQAPINF TSRLNRRASF PKYGGVDGGC FDRHLIFSRF  
RPISVFREAN EDESGFTCCA FSARERFLML GTCTGQLKLY NVFSGQEEAS YNCHNSAITH  
LEPSRDGSLI LTSATWSQPL SALWGMKSVF DMKHSFTEDH YVEFSKHSQD RVIGTKGDIA  
HIYDIQTGNK LLTLFNPDIA NNYKRNCATF NPTDDLVLND GVLWDVRSQA AIHKFDKFNM  
NISGVFHPNG LEVIINTEIW DLRTFHLLHT VPALDQCRVV FNHTGTVMYG AMLQADDEDD  
LMEERMKSPF GSSFRFTNAT DYKPIATIDV KRNIFDLCTD TKDCYLAVIE NQGSMDALNM  
DTVCRLYEVG RQRLAEDEDE EEDQEEEEQE EEDDDEDDDD TDDLDELDTD QLLEAELEED  
DNNENAGEDG DNDFPSDEE LANLLEEGED GEDEDSDADE EVELILGDTD SSDNSDLEDD  
IILSLNE

**Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.**

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### Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Human VPRBP 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.

## Product Details

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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.

**Grade:** Crystallography grade

## Target Details

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**Target:** VPRBP

**Alternative Name:** VPRBP ([VPRBP Products](#))

**Target Type:** Viral Protein

**Background:** Acts both as a substrate recognition component of E3 ubiquitin-protein ligase complexes and as an atypical serine/threonine-protein kinase, playing key roles in various processes such as cell cycle, telomerase regulation and histone modification. Probable substrate-specific adapter of a DCX (DDB1-CUL4-X-box) E3 ubiquitin-protein ligase complex, named CUL4A-RBX1-DDB1-DCAF1/VPRBP complex, which mediates ubiquitination and proteasome-dependent degradation of proteins such as NF2. Involved in the turnover of methylated proteins: recognizes and binds methylated proteins via its chromo domain, leading to ubiquitination of target proteins by the RBX1-DDB1-DCAF1/VPRBP complex (PubMed:23063525). The CUL4A-RBX1-DDB1-DCAF1/VPRBP complex is also involved in B-cell development: VPRBP is recruited by RAG1 to ubiquitinate proteins, leading to limit error-prone repair during V(D)J recombination. Also part of the EDVP complex, an E3 ligase complex that mediates ubiquitination of proteins such as TERT, leading to TERT degradation and telomerase inhibition (PubMed:23362280). Also acts as an atypical serine/threonine-protein kinase that specifically mediates phosphorylation of 'Thr-120' of histone H2A (H2AT120ph) in a nucleosomal context, thereby repressing transcription. H2AT120ph is present in the regulatory region of many tumor

## Target Details

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suppressor genes, down-regulates their transcription and is present at high level in a number of tumors (PubMed:24140421). Involved in JNK-mediated apoptosis during cell competition process via its interaction with LLGL1 and LLGL2 (PubMed:20644714). In case of infection by HIV-1 virus, it is recruited by HIV-1 Vpr in order to hijack the CUL4A-RBX1-DDB1-DCAF1/VRBP function leading to arrest the cell cycle in G2 phase, and also to protect the viral protein from proteasomal degradation by another E3 ubiquitin ligase. The HIV-1 Vpr protein hijacks the CUL4A-RBX1-DDB1-DCAF1/VRBP complex to promote ubiquitination and degradation of proteins such as TERT and ZIP/ZGPAT. In case of infection by HIV-2 virus, it is recruited by HIV-2 Vpx in order to hijack the CUL4A-RBX1-DDB1-DCAF1/VRBP function leading to enhanced efficiency of macrophage infection and promotion of the replication of cognate primate lentiviruses in cells of monocyte/macrophage lineage. {ECO:0000269|PubMed:16964240, ECO:0000269|PubMed:17314515, ECO:0000269|PubMed:17559673, ECO:0000269|PubMed:17609381, ECO:0000269|PubMed:17620334, ECO:0000269|PubMed:17626091, ECO:0000269|PubMed:17630831, ECO:0000269|PubMed:18332868, ECO:0000269|PubMed:18464893, ECO:0000269|PubMed:18524771, ECO:0000269|PubMed:18606781, ECO:0000269|PubMed:19264781, ECO:0000269|PubMed:19287380, ECO:0000269|PubMed:19923175, ECO:0000269|PubMed:20644714, ECO:0000269|PubMed:22184063, ECO:0000269|PubMed:23063525, ECO:0000269|PubMed:23362280, ECO:0000269|PubMed:24116224, ECO:0000269|PubMed:24140421, ECO:0000269|PubMed:24336198}.

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Molecular Weight: 170.0 kDa Including tag.

UniProt: [Q9Y4B6](#)

## 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.

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)

## Images

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