

## Datasheet for ABIN3137168 RENT1/UPF1 Protein (AA 1-1124) (His tag)



[Go to Product page](#)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	RENT1/UPF1 (UPF1)
Protein Characteristics:	AA 1-1124
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RENT1/UPF1 protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

#### Product Details

Sequence:	<p>MSVEAYGPSS QTLTFLDTEE AELLGADTQG SEFEFTDFTL PSQTQTTPGG PGGAGGPGGA</p> <p>GAGGAAGQLD AQVGPEGILQ NGAVDDSVAK TSQLLAELNF EEDEEDTYYT KDLPVHACSY</p> <p>CGIHDPACVV YCNTSKKWFC NGRGNTSGSH IVNHLVRAKC KEVTLHKDGP LGETVLECYN</p> <p>CGCRNVFLLG FIPAKADSVV VLLCRQPCAS QSSLKDINWD SSQWQPLIQD RCFLSWLVKI</p> <p>PSEQEQLRAR QITAAQINKL EELWKENPSA TLEDLEKPGV DEEPQHVLLR YEDAYQYQNI</p> <p>FGPLVKLEAD YDKKLKESQT QDNITVRWDL GLNKKRIAFF TLPKTDSGNE DLVIIWLRDM</p> <p>RLMQGDEICL RYKGD LAPLW KGIGHVIKVP DNYGDEIAIE LRSSVGAPVE VTHNFQVDFV</p> <p>WKSTSFDRMQ SALKTFAYDE TSVSGYIYHK LLGHEVEDVV IKCQLPKRFT AQGLPDLNHS</p> <p>QVYAVKTVLQ RPLSLIQGPP GTGKTVTSAT IVYHLARQGN GPVLVCAPSN IAVDQLTEKI</p> <p>HQTGLKVVRL CAKSREIDS PVSFLALHNQ IRNMDSMP EL QKLQQLKDET GELSSADEKR</p> <p>YRALKRTAER ELLMNADV IC CTCVGAGDPR LAKMQFRSIL IDESTQATEP ECMVPVWLGA</p> <p>KQLILVGDHC QLGPVVMCKK AAKAGLSQSL FERLVVLGIR PIRLQVQYRM HPALSAFPSN</p>
-----------	---

IFYEGSLQNG VTAADRVKKG FDFQWPQDK PMFFYVTQGQ EEIASSGTSY LNRTEANVE  
KITTKLLKAG AKPDQIGIIT PYEGQRSYLV QYMQFSGSLH TKLYQEVEIA SVDAFQGREK  
DFIILSCVRA NEHQGIGFLN DPRRLNVALT RARYGVIIIG NPKALSKQPL WNHLLSYYKE  
QKALVEGPLN NLRESLMQFS KPRKLVNTVN PGARFMTTAM YDAREAIIPG SVYDRSSQGR  
PSNMYFQTHD QISMISAGPS HVAAMNIPIF FNLVMPPMPP PGYFGQANGP AAGRGTPTKTK  
TGRGGRQKNR FGLPGPSQTT LPNSQASQDV ASQPFSQGAL TQGYVSMSQP SQMSQPGLSQ  
PELSQDSYLG DEFKSQIDVA LSQDSTYQGE RAYQHGGVTG LSQY

**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.
- Mouse Upf1 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

## Product Details

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

Target:	RENT1/UPF1 (UPF1)
Alternative Name:	Upf1 ( <a href="#">UPF1 Products</a> )
Background:	<p>RNA-dependent helicase and ATPase required for nonsense-mediated decay (NMD) of mRNAs containing premature stop codons. Is recruited to mRNAs upon translation termination and undergoes a cycle of phosphorylation and dephosphorylation, its phosphorylation appears to be a key step in NMD. Recruited by release factors to stalled ribosomes together with the SMG1C protein kinase complex to form the transient SURF (SMG1-UPF1-eRF1-eRF3) complex. In EJC-dependent NMD, the SURF complex associates with the exon junction complex (EJC) (located 50-55 or more nucleotides downstream from the termination codon) through UPF2 and allows the formation of an UPF1-UPF2-UPF3 surveillance complex which is believed to activate NMD. Phosphorylated UPF1 is recognized by EST1B/SMG5, SMG6 and SMG7 which are thought to provide a link to the mRNA degradation machinery involving exonucleolytic and endonucleolytic pathways, and to serve as adapters to protein phosphatase 2A (PP2A), thereby triggering UPF1 dephosphorylation. UPF1 can also activate NMD without UPF2 or UPF3, and in the absence of the NMD-enhancing downstream EJC indicative for alternative NMD pathways. Plays a role in replication-dependent histone mRNA degradation at the end of phase S, the function is independent of UPF2. For the recognition of premature termination codons (PTC) and initiation of NMD a competitive interaction between UPF1 and PABPC1 with the ribosome-bound release factors is proposed. The ATPase activity of UPF1 is required for disassembly of mRNPs undergoing NMD (By similarity). Essential for embryonic viability. {ECO:0000250}.</p>
Molecular Weight:	124.9 kDa Including tag.
UniProt:	<a href="#">Q9EPU0</a>
Pathways:	<a href="#">SARS-CoV-2 Protein Interactome</a>

## 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:	Protein has not been tested for activity yet. 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