Datasheet for ABIN7555191

RENT1/UPF1 Protein (AA 1-1129) (His tag)

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Overview

Quantity:	1 mg
Target:	RENT1/UPF1 (UPF1)
Protein Characteristics:	AA 1-1129
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This RENT1/UPF1 protein is labelled with His tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Purpose:	Custom-made recombinat UPF1 Protein expressed in mammalien cells.
Sequence:	MSVEAYGPSS QTLTFLDTEE AELLGADTQG SEFEFTDFTL PSQTQTPPGG PGGPGGGGAG GPGGAGAGAA AGQLDAQVGP EGILQNGAVD DSVAKTSQLL AELNFEEDEE DTYYTKDLPI HACSYCGIHD PACVVYCNTS KKWFCNGRGN TSGSHIVNHL VRAKCKEVTL HKDGPLGETV LECYNCGCRN VFLLGFIPAK ADSVVVLLCR QPCASQSSLK DINWDSSQWQ PLIQDRCFLS WLVKIPSEQE QLRARQITAQ QINKLEELWK ENPSATLEDL EKPGVDEEPQ HVLLRYEDAY QYQNIFGPLV KLEADYDKKL KESQTQDNIT VRWDLGLNKK RIAYFTLPKT DSGNEDLVII WLRDMRLMQG DEICLRYKGD LAPLWKGIGH VIKVPDNYGD EIAIELRSSV GAPVEVTHNF QVDFVWKSTS FDRMQSALKT FAVDETSVSG YIYHKLLGHE VEDVIIKCQL PKRFTAQGLP DLNHSQVYAV KTVLQRPLSL IQGPPGTGKT VTSATIVYHL ARQGNGPVLV CAPSNIAVDQ LTEKIHQTGL KVVRLCAKSR EAIDSPVSFL ALHNQIRNMD SMPELQKLQQ LKDETGELSS ADEKRYRALK RTAERELLMN ADVICCTCVG AGDPRLAKMQ FRSILIDEST QATEPECMVP

Product Details

	VVLGAKQLIL VGDHCQLGPV VMCKKAAKAG LSQSLFERLV VLGIRPIRLQ VQYRMHPALS AFPSNIFYEG SLQNGVTAAD RVKKGFDFQW PQPDKPMFFY VTQGQEEIAS SGTSYLNRTE AANVEKITTK LLKAGAKPDQ IGIITPYEGQ RSYLVQYMQF SGSLHTKLYQ EVEIASVDAF QGREKDFIIL SCVRANEHQG IGFLNDPRRL NVALTRARYG VIIVGNPKAL SKQPLWNHLL NYYKEQKVLV EGPLNNLRES LMQFSKPRKL VNTINPGARF MTTAMYDARE AIIPGSVYDR SSQGRPSSMY FQTHDQIGMI SAGPSHVAAM NIPIPFNLVM PPMPPPGYFG QANGPAAGRG TPKGKTGRGG RQKNRFGLPG PSQTNLPNSQ ASQDVASQPF SQGALTQGYI SMSQPSQMSQ PGLSQPELSQ DSYLGDEFKS QIDVALSQDS TYQGERAYQH GGVTGLSQY **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**
Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalien cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris Page, Western Blot
Grade:	custom-made

Target Details

Target:	RENT1/UPF1 (UPF1)
Alternative Name:	UPF1 (UPF1 Products)
Background:	Regulator of nonsense transcripts 1 (EC 3.6.4.12) (EC 3.6.4.13) (ATP-dependent helicase RENT1) (Nonsense mRNA reducing factor 1) (NORF1) (Up-frameshift suppressor 1 homolog)

	(hUpf1),FUNCTION: RNA-dependent helicase required for nonsense-mediated decay (NMD) of aberrant mRNAs containing premature stop codons and modulates the expression level of normal mRNAs (PubMed:11163187, PubMed:16086026, PubMed:18172165, PubMed:21145460, PubMed:21419344, PubMed:24726324). 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 (PubMed:11544179, PubMed:25220460). Recruited by release factors to stalled ribosomes together with the SMG1C protein kinase complex to form the transient SURF (SMG1-UPF1-eRF1-eRF3) complex (PubMed:19417104). 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 (PubMed:21419344). 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 and allowing the recycling of NMD factors (PubMed:12554878). UPF1 can also activate NMD without UPF2 or UPF3, and in the absence of the NMD-enhancing downstream EJC indicative for alternative NMD pathways (PubMed:18447585). Plays a role in replication-dependent histone mRNA degradation at the end of phase S, the function is independent of UPF2 (PubMed:16086026, PubMed:18172165). 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 (PubMed:18447585, PubMed:25220460). The ATPase activity of UPF1 is required for disassembly of mRNPs undergoing NMD (PubMed:21145460). Together with UPF2 and dependent on TDRD6, mediates the degradation of mRNA harboring long 3'UTR by inducing the NMD machinery (By similarity). Also capable of unwinding double-stranded DNA and translocating on single-stranded DNA (PubMed:30218034). {ECO:0000250|UniProtKB:Q9EPU0, ECO:0000269|PubMed:11163187, ECO:0000269|PubMed:11544179, ECO:0000269|PubMed:12554878, ECO:0000269|PubMed:16086026, ECO:0000269|PubMed:18172165, ECO:0000269|PubMed:18447585, ECO:0000269|PubMed:19417104, ECO:0000269|PubMed:21145460, ECO:0000269|PubMed:21419344, ECO:0000269|PubMed:24726324, ECO:0000269|PubMed:25220460, ECO:0000269|PubMed:30218034}.
Molecular Weight:	124.3 kDa
UniProt:	Q92900

Target Details

Pathways:	SARS-CoV-2 Protein Interactome

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.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition 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:	12 months

