

Datasheet for ABIN3096193

USP13 Protein (AA 1-863) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	USP13
Protein Characteristics:	AA 1-863
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This USP13 protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	<p> MQRRGALFGM PGGSGGRKMA AGDIGELLVP HMPTIRVPRS GDRVYKNECA FSYDSPNSEG GLYVCMNTFL AFGREHVERH FRKTGQSVYM HLKRVREKV RGASGGALPK RRNSKIFLDL DTDDDLNSDD YEYEDEAKLV IFPDHYEIAL PNIEELPALV TIACDAVLSS KSPYRKQDPD TWENELPVSK YANNLTQLDN GVRIPPSGWK CARCDLRENL WLNLTGGSVL CGKWFFDSSG GNGHALEHYR DMGYPLAVKL GTITPDGADV YSFQEEEPVL DPHLAKHLAH FGIDMLMHG TENGLQDNDI KLRVSEWEVI QESGTKLKPM YGPGYTGLKN LGNSCYLSSV MQAIFSIPEF QRAYVGNLPR IFDYSPLDPT QDFNTQMTKL GHLLSGQYS KPPVKSELIE QVMKEEHKPQ QNGISPRMFK AFVSKSHPEF SSNRQQDAQE FFLHLVNLVE RNRIGSENPS DVFRFLVEER IQCCQTRKVR YTERVDYLMQ LPVAMEAATN KDELIAYELT RREAENRRP LPELVRAKIP FSACLQAFSE PENVDDFWSS ALQAKSAGVK TSRFASFPEY LVVQIKKFTF GLDWVPKKFD VSIDMPDLLD INHLRARGLQ PGEELPDIS PPIVIPDDSK DRLMNQLIDP SDIDESSVMQ </p>

LAEMGFPLEA CRKAVYFTGN MGAEVAFNWI IVHMEEPDFA EPLTMPGYGG AASAGASVFG
ASGLDNQPPE EIVAIITSMG FQRNQAIAL RATNNNLERA LDWIFSHPEF EEDSDFVIEM
ENNANANIIS EAKPEGPRVK DSGSTYELFA FISHMGTSTM SGHYICHIAKK EGRWVIYNDH
KVCASERPPK DLGYMYFYRR IPS

Sequence without tag. The proposed Strep-Tag is based on experience s 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 in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified in one-step affinity chromatography
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- 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.

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.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured against its specific reference buffer.
- We use the ExPASy's ProtParam tool to determine the absorption coefficient of each protein.

Product Details

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (AliCE®).
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Purity:	> 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
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Grade:	custom-made
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Target Details

Target:	USP13
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Alternative Name:	USP13 (USP13 Products)
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Background:	<p>Ubiquitin carboxyl-terminal hydrolase 13 (EC 3.4.19.12) (Deubiquitinating enzyme 13) (Isopeptidase T-3) (ISOT-3) (Ubiquitin thioesterase 13) (Ubiquitin-specific-processing protease 13),FUNCTION: Deubiquitinase that mediates deubiquitination of target proteins such as BECN1, MITF, SKP2 and USP10 and is involved in various processes such as autophagy, endoplasmic reticulum-associated degradation (ERAD), cell cycle progression or DNA damage response (PubMed:21571647, PubMed:32772043, PubMed:33592542). Component of a regulatory loop that controls autophagy and p53/TP53 levels: mediates deubiquitination of BECN1, a key regulator of autophagy, leading to stabilize the PIK3C3/VPS34-containing complexes. Alternatively, forms with NEDD4 a deubiquitination complex, which subsequently stabilizes VPS34 to promote autophagy (PubMed:32101753). Also deubiquitinates USP10, an essential regulator of p53/TP53 stability. In turn, PIK3C3/VPS34-containing complexes regulate USP13 stability, suggesting the existence of a regulatory system by which PIK3C3/VPS34-containing complexes regulate p53/TP53 protein levels via USP10 and USP13. Recruited by nuclear UFD1 and mediates deubiquitination of SKP2, thereby regulating endoplasmic reticulum-associated degradation (ERAD). Also regulates ERAD through the deubiquitination of UBL4A a component of the BAG6/BAT3 complex. Mediates stabilization of SIAH2 independently of deubiquitinase activity: binds ubiquitinated SIAH2 and acts by impairing SIAH2 autoubiquitination. Regulates the cell cycle progression by stabilizing cell cycle proteins such as SKP2 and AURKB (PubMed:32772043). In addition, plays an important role in maintaining genomic stability and in DNA replication checkpoint activation via regulation of RAP80 and TOPBP1 (PubMed:33592542). Deubiquitinates the multifunctional protein HMGB1 and subsequently drives its nucleocytoplasmic localization and its secretion (PubMed:36585612). Positively regulates type I and type II interferon signalings by deubiquitinating STAT1 but negatively regulates antiviral response by deubiquitinating STING1 (PubMed:23940278, PubMed:28534493). {ECO:0000269 PubMed:17653289, ECO:0000269 PubMed:21571647, ECO:0000269 PubMed:21659512, ECO:0000269 PubMed:21811243,</p>
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Target Details

ECO:0000269|PubMed:21962518, ECO:0000269|PubMed:22216260,
ECO:0000269|PubMed:24424410, ECO:0000269|PubMed:28534493,
ECO:0000269|PubMed:32101753, ECO:0000269|PubMed:32772043,
ECO:0000269|PubMed:33592542, ECO:0000269|PubMed:36585612}.

Molecular Weight: 97.3 kDa

UniProt: [Q92995](#)

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.

Comment: ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from *Nicotiana tabacum* c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.

During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: The buffer composition is at the discretion of the manufacturer.
Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.**

Handling Advice: Avoid repeated freeze-thaw cycles.

Storage: -80 °C

Storage Comment: Store at -80°C.

Handling

Expiry Date: 12 months