Datasheet for ABIN3096168

# USP20 Protein (AA 1-914) (Strep Tag)

Go to Product page

## Overview

| | |
|---|---|
| Quantity: | 250 µg |
| Target: | USP20 |
| Protein Characteristics: | AA 1-914 |
| Origin: | Human |
| Source: | Cell-free protein synthesis (CFPS) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This USP20 protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

| | |
|---|---|
| Brand: | AliCE® |
| Sequence: | MGDSRDLCPH LDSIGEVTKE DLLLKSKGTC QSCGVTGPNL WACLQVACPY VGCGESFADH STIHAQAKKH NLTVNLTTFR LWCYACEKEV FLEQRLAAPL LGSSSKFSEQ DSPPPSHPLK AVPIAVADEG ESESEDDDLK PRGLTGMKNL GNSCYMNAAL QALSNCPPLT QFFLECGGLV RTDKKPALCK SYQKLVSEVW HKKRPSYVVP TSLSHGIKLV NPMFRGYAQQ DTQEFLRCLM DQLHEELKEP VVATVALTEA RDSDSSDTDE KREGDRSPSE DEFLSCDSSS DRGEGDGQGR GGGSSQAETE LLIPDEAGRA ISEKERMKDR KFSWGQQRTN SEQVDEDADV DTAMAALDDQ PAEAQPPSPR SSSPCRTPEP DNDAHLRSSS RPCSPVHHHE GHAKLSSSPP RASPVRMAPS YVLKKAQVLS AGSRRRKEQR YRSVISDIFD GSILSLVQCL TCDRVSTTVE TFQDLSLPIP GKEDLAKLHS AIYQNVPAKP GACGDSYAAQ GWLAFIVEYI RRFVVSCTPS WFWGPVVTLE DCLAAFFAAD ELKGDNMYSC ERCKKLRNGV KYCKVLRLPE ILCIHLKRFR HEVMYSFKIN SHVSFPLEGL DLRPFLAKEC TSQITTYDLL SVICHHGTAG SGHYIAYCQN VINGQWYEFD |

DQYVTEVHET VVQNAEGYVL FYRKSSEEAM RERQQVVSLA AMREPSLLRF YVSREWLNKF NTFAEPGPIT NQTFLCSHGG IPPHKYHYID DLVVILPQNV WEHLYNRFGG GPAVNHLYVC SICQVEIEAL AKRRRIEIDT FIKLNKAFQA EESPGVIYCI SMQWFREWEA FVKGKDNEPP GPIDNSRIAQ VKGSGHVQLK QGADYGQISE ETWTYLNSLY GGGPEIAIRQ SVAQPLGPEN LHGEQKIEAE TRAV

**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®). |
| Purity: | > 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC). |
| Grade: | custom-made |

## Target Details

| | |
|---|---|
| Target: | USP20 |
| Alternative Name: | USP20 (USP20 Products) |
| Background: | Ubiquitin carboxyl-terminal hydrolase 20 (EC 3.4.19.12) (Deubiquitinating enzyme 20) (Ubiquitin thioesterase 20) (Ubiquitin-specific-processing protease 20) (VHL-interacting deubiquitinating enzyme 2) (hVDU2),FUNCTION: Deubiquitinating enzyme that plays a role in many cellular processes including autophagy, cellular antiviral response or membrane protein biogenesis (PubMed:27801882, PubMed:29487085). Attenuates TLR4-mediated NF-kappa-B signaling by cooperating with beta-arrestin-2/ARRB2 and inhibiting TRAF6 autoubiquitination (PubMed:26839314). Promotes cellular antiviral responses by deconjugating 'Lys-33' and 'Lys-48'-linked ubiquitination of STING1 leading to its stabilization (PubMed:27801882). Plays an essential role in autophagy induction by regulating the ULK1 stability through deubiquitination of ULK1 (PubMed:29487085). Acts as a positive regulator for NF-kappa-B activation by TNF-alpha through deubiquitinating 'Lys-48'-linked polyubiquitination of SQSTM1, leading to its increased stability (PubMed:32354117). Acts as a regulator of G-protein coupled receptor (GPCR) signaling by mediating the deubiquitination beta-2 adrenergic receptor (ADRB2)(PubMed:19424180). Plays a central role in ADRB2 recycling and resensitization after prolonged agonist stimulation by constitutively binding ADRB2, mediating deubiquitination of ADRB2 and inhibiting lysosomal trafficking of ADRB2. Upon dissociation, it is probably transferred to the translocated beta-arrestins, possibly leading to beta-arrestins deubiquitination and disengagement from ADRB2 (PubMed:19424180). This suggests the existence of a dynamic exchange between the ADRB2 and beta-arrestins. Deubiquitinates DIO2, thereby regulating thyroid hormone regulation. Deubiquitinates HIF1A, leading to stabilize HIF1A and enhance HIF1A-mediated activity (PubMed:15776016). Deubiquitinates MCL1, a pivotal member of the anti-apoptotic Bcl-2 protein family to regulate its stability (PubMed:35063767). Within the endoplasmic reticulum, participates with USP33 in the rescue of post-translationally targeted membrane proteins that are inappropriately ubiquitinated by the |

## Target Details

| | |
|---|---|
| | cytosolic protein quality control in the cytosol (PubMed:33792613). {ECO:0000269\|PubMed:12056827, ECO:0000269\|PubMed:12865408, ECO:0000269\|PubMed:15776016, ECO:0000269\|PubMed:19424180, ECO:0000269\|PubMed:26839314, ECO:0000269\|PubMed:27801882, ECO:0000269\|PubMed:29487085, ECO:0000269\|PubMed:32354117, ECO:0000269\|PubMed:33792613, ECO:0000269\|PubMed:35063767}. |
| Molecular Weight: | 102.0 kDa |
| UniProt: | Q9Y2K6 |
| Pathways: | Regulation of G-Protein Coupled Receptor Protein Signaling |

## 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.<br>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.<br>Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol **Might differ depending on protein.** |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |

## Handling

| | |
|---|---|
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |