Datasheet for ABIN3096154

# USP2 Protein (AA 1-605) (Strep Tag)

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## Overview

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| Quantity: | 250 µg |
| Target: | USP2 |
| Protein Characteristics: | AA 1-605 |
| Origin: | Human |
| Source: | Cell-free protein synthesis (CFPS) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This USP2 protein is labelled with Strep Tag. |
| Application: | SDS-PAGE (SDS), Western Blotting (WB), ELISA |

## Product Details

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| Brand: | AliCE® |
| Sequence: | MSQLSSTLKR YTESARYTDA HYAKSGYGAY TPSSYGANLA ASLLEKEKLG FKPVPTSSFL TRPRTYGPSS LLDYDRGRPL LRPDITGGGK RAESQTRGTE RPLGSGLSGG SGFPYGVTNN CLSYLPINAY DQGVTLTQKL DSQSDLARDF SSLRTSDSYR IDPRNLGRSP MLARTRKELC TLQGLYQTAS CPEYLVDYLE NYGRKGSASQ VPSQAPPSRV PEIISPTYRP IGRYTLWETG KGQAPGPSRS SSPGRDGMNS KSAQGLAGLR NLGNTCFMNS ILQCLSNTRE LRDYCLQRLY MRDLHHGSNA HTALVEEFAK LIQTIWTSSP NDVVSPSEFK TQIQRYAPRF VGYNQQDAQE FLRFLLDGLH NEVNRVTLRP KSNPENLDHL PDDEKGRQMW RKYLEREDSR IGDLFVGQLK SSLTCTDCGY CSTVFDPFWD LSLPIAKRGY PEVTLMDCMR LFTKEDVLDG DEKPTCCRCR GRKRCIKKFS IQRFPKILVL HLKRFSESRI RTSKLTTFVN FPLRDLDLRE FASENTNHAV YNLYAVSNHS GTTMGGHYTA YCRSPGTGEW HTFNDSSVTP MSSSQVRTSD AYLLFYELAS PPSRM |

## Product Details

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| | **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:<br>• Made in Germany - from design to production - by highly experienced protein experts.<br>• Protein expressed with ALiCE® and purified in one-step affinity chromatography<br>• These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).<br>• State-of-the-art algorithm used for plasmid design (Gene synthesis).<br><br>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.<br>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.<br><br>Expression System:<br>• 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!<br><br>Concentration:<br>• The concentration of our recombinant proteins is measured using the absorbance at 280nm.<br>• The protein's absorbance will be measured against its specific reference buffer.<br>• We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein. |
| 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). |

## Product Details

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| Grade: | custom-made |

## Target Details

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| Target: | USP2 |
| Alternative Name: | USP2 (USP2 Products) |
| Background: | Ubiquitin carboxyl-terminal hydrolase 2 (EC 3.4.19.12) (41 kDa ubiquitin-specific protease) (Deubiquitinating enzyme 2) (Ubiquitin thioesterase 2) (Ubiquitin-specific-processing protease 2),FUNCTION: Hydrolase that deubiquitinates polyubiquitinated target proteins such as MDM2, MDM4 and CCND1 (PubMed:17290220, PubMed:19917254, PubMed:19838211). Isoform 1 and isoform 4 possess both ubiquitin-specific peptidase and isopeptidase activities (By similarity). Deubiquitinates MDM2 without reversing MDM2-mediated p53/TP53 ubiquitination and thus indirectly promotes p53/TP53 degradation and limits p53 activity (PubMed:17290220, PubMed:19838211). Has no deubiquitinase activity against p53/TP53 (PubMed:17290220). Prevents MDM2-mediated degradation of MDM4 (PubMed:17290220). Plays a role in the G1/S cell-cycle progression in normal and cancer cells (PubMed:19917254). Regulates the circadian clock by modulating its intrinsic circadian rhythm and its capacity to respond to external cues (By similarity). Associates with clock proteins and deubiquitinates core clock component PER1 but does not affect its overall stability (By similarity). Regulates the nucleocytoplasmic shuttling and nuclear retention of PER1 and its repressive role on the clock transcription factors CLOCK and BMAL1 (By similarity). Plays a role in the regulation of myogenic differentiation of embryonic muscle cells (By similarity). {ECO:0000250\|UniProtKB:O88623, ECO:0000250\|UniProtKB:Q5U349, ECO:0000269\|PubMed:17290220, ECO:0000269\|PubMed:19838211, ECO:0000269\|PubMed:19917254}., FUNCTION: [Isoform 4]: Circadian clock output effector that regulates Ca(2+) absorption in the small intestine. Probably functions by regulating protein levels of the membrane scaffold protein NHERF4 in a rhythmic manner, and is therefore likely to control Ca(2+) membrane permeability mediated by the Ca(2+) channel TRPV6 in the intestine. {ECO:0000250\|UniProtKB:O88623}. |
| Molecular Weight: | 68.1 kDa |
| UniProt: | O75604 |

## 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 |

## Application Details

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| | 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

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