Datasheet for ABIN3095583

# SMURF2 Protein (AA 1-748) (Strep Tag)

1 Image

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## Overview

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| Quantity: | 1 mg |
| Target: | SMURF2 |
| Protein Characteristics: | AA 1-748 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This SMURF2 protein is labelled with Strep Tag. |
| Application: | SDS-PAGE (SDS), ELISA, Western Blotting (WB) |

## Product Details

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| Sequence: | MSNPGGRRNG PVKLRLTVLC AKNLVKKDFF RLPDPFAKVV VDGSGQCHST DTVKNTLDPK WNQHYDLYIG KSDSVTISVW NHKKIHKKQG AGFLGCVRLL SNAINRLKDT GYQRLDLCKL GPNDNDTVRG QIVVSLQSRD RIGTGGQVVD CSRLFDNDLP DGWEERRTAS GRIQYLNHIT RTTQWERPTR PASEYSSPGR PLSCFVDENT PISGTNGATC GQSSDPRLAE RRVRSQRHRN YMSRTHLHTP PDLPEGYEQR TTQQGQVYFL HTQTGVSTWH DPRVPRDLSN INCEELGPLP PGWEIRNTAT GRVYFVDHNN RTTQFTDPRL SANLHLVLNR QNQLKDQQQQ QVVSLCPDDT ECLTVPRYKR DLVQKLKILR QELSQQQPQA GHCRIEVSRE EIFEESYRQV MKMRPKDLWK RLMIKFRGEE GLDYGGVARE WLYLLSHEML NPYYGLFQYS RDDIYTLQIN PDSAVNPEHL SYFHFVGRIM GMAVFHGHYI DGGFTLPFYK QLLGKSITLD DMELVDPDLH NSLVWILEND ITGVLDHTFC VEHNAYGEII QHELKPNGKS IPVNEENKKE YVRLYVNWRF LRGIEAQFLA LQKGFNEVIP QHLLKTFDEK ELELIICGLG KIDVNDWKVN TRLKHCTPDS NIVKWFWKAV EFFDEERRAR LLQFVTGSSR VPLQGFKALQ GAAGPRLFTI HQIDACTNNL PKAHTCFNRI |

## Product Details

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| | DIPPYESYEK LYEKLLTAIE ETCGFAVE<br>**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 by multi-step, protein-specific process to ensure correct folding and modification.<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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.<br>• We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein. |
| Purification: | Two step purification of proteins expressed in Almost Living Cell-Free Expression System |

## Product Details

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| | (ALiCE®):<br>1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.<br>2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot. |
| Purity: | >80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot. |
| Endotoxin Level: | Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg) |
| Grade: | Crystallography grade |

## Target Details

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| Target: | SMURF2 |
| Alternative Name: | SMURF2 (SMURF2 Products) |
| Background: | E3 ubiquitin-protein ligase SMURF2 (hSMURF2) (EC 2.3.2.26) (HECT-type E3 ubiquitin transferase SMURF2) (SMAD ubiquitination regulatory factor 2) (SMAD-specific E3 ubiquitin-protein ligase 2),FUNCTION: E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates (PubMed:11016919). Interacts with SMAD7 to trigger SMAD7-mediated transforming growth factor beta/TGF-beta receptor ubiquitin-dependent degradation, thereby down-regulating TGF-beta signaling (PubMed:11163210, PubMed:12717440, PubMed:21791611). In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with AIMP1 (PubMed:18448069). Also forms a stable complex with TGF-beta receptor-mediated phosphorylated SMAD1, SMAD2 and SMAD3, and targets SMAD1 and SMAD2 for ubiquitination and proteasome-mediated degradation (PubMed:11016919, PubMed:11158580, PubMed:11389444). SMAD2 may recruit substrates, such as SNON, for ubiquitin-dependent degradation (PubMed:11389444). Negatively regulates TGFB1-induced epithelial-mesenchymal transition and myofibroblast differentiation (PubMed:30696809). {ECO:0000269\|PubMed:11016919, ECO:0000269\|PubMed:11158580, ECO:0000269\|PubMed:11163210, ECO:0000269\|PubMed:11389444, ECO:0000269\|PubMed:12717440, ECO:0000269\|PubMed:18448069, ECO:0000269\|PubMed:21791611, ECO:0000269\|PubMed:30696809}., FUNCTION: (Microbial infection) In case of filoviruses Ebola/EBOV and Marburg/MARV infection, the complex formed by viral matrix protein VP40 and SMURF2 facilitates virus budding. {ECO:0000269\|PubMed:33673144}. |

## Target Details

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| Molecular Weight: | 86.2 kDa |
| UniProt: | Q9HAU4 |

## 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 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. If you have a special request, please contact us. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | Unlimited (if stored properly) |


**Image 1.** „Crystallography Grade“ protein due to multi-step, protein-specific purification process

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