Datasheet for ABIN3095643

Spartan Protein (AA 1-489) (Strep Tag)

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Overview

Quantity:	250 µg
Target:	Spartan (C1orf124)
Protein Characteristics:	AA 1-489
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Spartan protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Brand:	AliCE®
Sequence:	MDDDLMLALR LQEEWNLQEA ERDHAQESLS LVDASWELVD PTPDLQALFV QFNDQFFWGQ LEAVEVKWSV RMTLCAGICS YEGKGGMCSI RLSEPLLKLR PRKDLVETLL HEMIHAYLFV TNNDKDREGH GPEFCKHMHR INSLTGANIT VYHTFHDEVD EYRRHWWRCN GPCQHRPPYY GYVKRATNRE PSAHDYWWAE HQKTCGGTYI KIKEPENYSK KGKGKAKLGK EPVLAAENKD KPNRGEAQLV IPFSGKGYVL GETSNLPSPG KLITSHAINK TQDLLNQNHS ANAVRPNSKI KVKFEQNGSS KNSHLVSPAV SNSHQNVLSN YFPRVSFANQ KAFRGVNGSP RISVTVGNIP KNSVSSSSQR RVSSSKISLR NSSKVTESAS VMPSQDVSGS EDTFPNKRPR LEDKTVFDNF FIKKEQIKSS GNDPKYSTTT AQNSSSSSSQ SKMVNCPVCQ NEVLESQINE HLDWCLEGDS IKVKSEESL **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.
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:	Spartan (C1orf124)
Alternative Name:	SPRTN (C1orf124 Products)
Background:	DNA-dependent metalloprotease SPRTN (EC 3.4.24.-) (DNA damage protein targeting VCP) (DVC1) (Protein with SprT-like domain at the N terminus) (Spartan),FUNCTION: DNA-dependent metalloendopeptidase that mediates the proteolytic cleavage of covalent DNA-protein cross-links (DPCs) during DNA synthesis, thereby playing a key role in maintaining genomic integrity (PubMed:27852435, PubMed:27871366, PubMed:27871365, PubMed:32649882, PubMed:30893605, PubMed:36608669). DPCs are highly toxic DNA lesions that interfere with essential chromatin transactions, such as replication and transcription, and which are induced by reactive agents, such as UV light or formaldehyde (PubMed:27852435, PubMed:27871366, PubMed:27871365, PubMed:32649882, PubMed:36608669). Associates with the DNA replication machinery and specifically removes DPCs during DNA synthesis (PubMed:27852435, PubMed:27871366, PubMed:27871365, PubMed:32649882). Catalyzes proteolytic cleavage of the HMCES DNA-protein cross-link following unfolding by the BRIP1/FANCJ helicase (PubMed:36608669). Acts as a pleiotropic protease for DNA-binding proteins cross-linked with DNA, such as TOP1, TOP2A, histones H3 and H4 (PubMed:27871366). Mediates degradation of DPCs that are not ubiquitinated, while it is not able to degrade ubiquitinated DPCs (By similarity). SPRTN activation requires polymerase collision with DPCs followed by helicase bypass of DPCs (By similarity). Involved in recruitment of VCP/p97 to sites of DNA damage (PubMed:22902628, PubMed:23042605, PubMed:23042607, PubMed:32152270). Also acts as an activator of CHEK1 during normal DNA replication by mediating proteolytic cleavage of CHEK1, thereby promoting CHEK1 removal from chromatin and subsequent activation (PubMed:31316063). Does not activate CHEK1 in response to DNA damage (PubMed:31316063). May also act as a 'reader' of ubiquitinated PCNA: recruited to sites of UV damage and interacts with ubiquitinated PCNA and RAD18, the E3 ubiquitin ligase that monoubiquitinates PCNA (PubMed:22681887, PubMed:22894931, PubMed:22902628, PubMed:22987070). Facilitates chromatin association of RAD18 and is required for efficient PCNA monoubiquitination, promoting a feed-forward loop to enhance PCNA ubiquitination and translesion DNA synthesis (PubMed:22681887). {ECO:0000250|UniProtKB:A0A1L8G2K9, ECO:0000269|PubMed:22681887, ECO:0000269|PubMed:22894931, ECO:0000269|PubMed:22902628, ECO:0000269|PubMed:22987070, ECO:0000269|PubMed:23042605, ECO:0000269|PubMed:23042607, ECO:0000269|PubMed:27852435, ECO:0000269|PubMed:27871365, ECO:0000269|PubMed:27871366, ECO:0000269|PubMed:30893605, ECO:0000269|PubMed:31316063,

Target Details

	ECO:0000269|PubMed:32152270, ECO:0000269|PubMed:32649882, ECO:0000269|PubMed:36608669}.
Molecular Weight:	55.1 kDa
UniProt:	Q9H040

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.
Expiry Date:	12 months

