Datasheet for ABIN7562153

# Spartan Protein (AA 1-497) (His tag)

Go to Product page

## Overview

| | |
|---|---|
| Quantity: | 1 mg |
| Target: | Spartan (C1orf124) |
| Protein Characteristics: | AA 1-497 |
| Origin: | Mouse |
| Source: | HEK-293 Cells |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This Spartan protein is labelled with His tag. |
| Application: | Western Blotting (WB), SDS-PAGE (SDS) |

## Product Details

| | |
|---|---|
| Purpose: | Custom-made recombinat Sprtn Protein expressed in mammalien cells. |
| Sequence: | MDEDLVVALR LQEEWDVQMA RRAAAAREPV SLVDASWELV DPTPDLQALF LQFNDRFFWG QLEAVEVKWS VRMTLCAGIC TYEGRGGMCS IRLSEPLLKL RPRKDLVETL LHEMIHAYLF VTNNDKDREG HGPEFCKHMH RINQLTGANI TVYHTFHDEV DEYRRHWWRC NGPCQHRQPY YGYVKRATNR APSVHDYWWA DHQKTCGGTY IKIKEPENYS KKGRGKTKAD KQPASAVENK DKLCRGEAQL LIPFSGKGYV LGDASTCPSA GKLNTSYMVN EAKGLSSQDH SVSGLRLNSN AEVKCEQNCL PKKPHLVSPL PTASHQSVLS SYFPRVSVAN QKAFRNVNGS PVKNGTTGDG TKRPASGGSQ RKVPPSRASL RNTSKVTAPA SATVTSAAGT SATISREESG SEDQFLNKRP RLEDRTALDT IKEQTQSGGD LRSSSQPTAA SAPQSLSSQR RLVNCPVCQG VVVESQINEH LDRCLEGNKT NLRPRRV **Sequence without tag. The proposed Purification-Tag is based on experiences 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.** |

## Product Details

| | |
|---|---|
| Characteristics: | Key Benefits:<br>• Made to order protein - from design to production - by highly experienced protein experts.<br>• Protein expressed in mammalien cells and purified in one-step affinity chromatography<br>• The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.<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><br>If you are not interested in a full length protein, please contact us for individual protein fragments.<br><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. |
| Purity: | > 90 % as determined by Bis-Tris Page, Western Blot |
| Grade: | custom-made |

## Target Details

| | |
|---|---|
| Target: | Spartan (C1orf124) |
| Alternative Name: | Sprtn (C1orf124 Products) |
| Background: | DNA-dependent metalloprotease SPRTN (EC 3.4.24.-) (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:28199696, PubMed:27871365). 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:28199696, PubMed:27871365). Associates with the DNA replication machinery and specifically removes DPCs during DNA synthesis (By similarity). Catalyzes proteolytic cleavage of the HMCES DNA-protein cross-link following unfolding by the BRIP1/FANCJ helicase (By similarity). Acts as a pleiotropic protease for DNA-binding proteins cross-linked with DNA, such as TOP1, TOP2A, histones H3 and H4 (By similarity). Mediates degradation of DPCs that are not ubiquitinated, while it is not able to degrade ubiquitinated DPCs. SPRTN activation requires polymerase collision with DPCs followed by helicase bypass |

## Target Details

| | |
|---|---|
| | of DPCs (By similarity). Involved in recruitment of VCP/p97 to sites of DNA damage. 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. Does not activate CHEK1 in response to DNA damage. 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. 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 (By similarity). {ECO:0000250\|UniProtKB:A0A1L8G2K9, ECO:0000250\|UniProtKB:Q9H040, ECO:0000269\|PubMed:27871365, ECO:0000269\|PubMed:28199696}. |
| Molecular Weight: | 55.3 kDa |
| UniProt: | G3X912 |

## 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. |
| Restrictions: | For Research Use only |

## Handling

| | |
|---|---|
| Format: | Liquid |
| Buffer: | The buffer composition is at the discretion of the manufacturer. |
| Handling Advice: | Avoid repeated freeze-thaw cycles. |
| Storage: | -80 °C |
| Storage Comment: | Store at -80°C. |
| Expiry Date: | 12 months |