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Datasheet for ABIN3095407
Shugoshin Protein (AA 1-561) (Strep Tag)

Overview

Quantity:	1 mg
Target:	Shugoshin (SGOL1)
Protein Characteristics:	AA 1-561
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This Shugoshin protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MAKERCLKKS FQDSLEDIKK RMKEKRKNL AEIGKRRSFI AAPCQIITNT STLLKKNYQDN
NKMLVLALEN EKSKVKEAQD IILQLRKECY YLTCQLYALK GKLTSSQQTVE PAQNQEICSS
GMDPNSDDSS RNLVFKDLPQ IPLEETELPG QGESFQIEDQ IPTIPQDTLG VDFDSGEAKS
TDNVLPRTVS VRSSLKHCN SICQFDSLDD FETSHLAGKS FEFERVGFLD PLVNMHIPEN
VQHNACQWSK DQVNLSPKLI QPGTFTKKE DILESKSEQT KSKQRDTQER KREEKRKANR
RKSKRMSKYK ENKSENKKT V POKKMHKSVS SNDAYNFNLE EGVHLTPFRQ KVSNDNSREE
NNESEVSLCE SSGSGDSD LYLPTCKYIQ NPTSNSDRPV TRPLAKRALK YTDEKETEGS
KPTKTPTTTP PETQQSPHLS LKDITNVS LY PVVKIRRLSL SPKKNKASPA VALPKRRCTA
SVNYKEPTLA SKLRRGDPFT DLCFLNSPIF KQKDLRRSK KRALEVSPAK EAIFILYYVR
EFVSRFPDCR KCKLETHICL R

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 by multi-step, protein-specific process to ensure correct folding and modification.
- 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 will ensure that you receive a correctly folded 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 in several dilutions and is measured against its specific reference buffer.
- 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 (ALiCE®):

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.

Product Details

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)

Target Details

Target: Shugoshin (SGOL1)

Alternative Name: SG01 ([SGOL1 Products](#))

Background: Shugoshin 1 (Serologically defined breast cancer antigen NY-BR-85) (Shugoshin-like 1),FUNCTION: Plays a central role in chromosome cohesion during mitosis by preventing premature dissociation of cohesin complex from centromeres after prophase, when most of cohesin complex dissociates from chromosomes arms. May act by preventing phosphorylation of the STAG2 subunit of cohesin complex at the centromere, ensuring cohesin persistence at centromere until cohesin cleavage by ESPL1/separase at anaphase. Essential for proper chromosome segregation during mitosis and this function requires interaction with PPP2R1A. Its phosphorylated form is necessary for chromosome congression and for the proper attachment of spindle microtubule to the kinetochore. Necessary for kinetochore localization of PLK1 and CENPF. May play a role in the tension sensing mechanism of the spindle-assembly checkpoint by regulating PLK1 kinetochore affinity. Isoform 3 plays a role in maintaining centriole cohesion involved in controlling spindle pole integrity. Involved in centromeric enrichment of AUKRB in prometaphase. {ECO:0000269|PubMed:15604152, ECO:0000269|PubMed:15723797, ECO:0000269|PubMed:15737064, ECO:0000269|PubMed:16580887, ECO:0000269|PubMed:17617734, ECO:0000269|PubMed:17621308, ECO:0000269|PubMed:18331714, ECO:0000269|PubMed:20739936}.

Molecular Weight: 64.2 kDa

UniProt: [Q5FBB7](#)

Pathways: [Maintenance of Protein Location](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies

Application Details

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. 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)