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Datasheet for ABIN3136862
SMC1B Protein (AA 1-1248) (Strep Tag)

Overview

Quantity:	1 mg
Target:	SMC1B
Protein Characteristics:	AA 1-1248
Origin:	Mouse
Source:	Tobacco (<i>Nicotiana tabacum</i>)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMC1B protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence: MGHLELLLVE NFKSWRGRQV IGPFKRFTCI IGPNNGSGKSN VMDALSFVMG EKTTNLRVKN
IQELIHGAHT GKPVSSASV TIYIEDSGE EKTFTRIIRG GCSEYHFGDK PVSRSVYVAQ LENIGIIVKA
QNCLVFQGTV ESISMKKPKE RTQFFEEIST SGEFIGEYEA KKKKLQKAAE DAQFHFNVKK
NVAAERKHAK IEKEEAHYQ NLEELKINK IQLMLFQLYY NEEKINVLNT ELEQMDGNLS
VVKDTLSHHE NIFKAKKKDY GMLTRQLQQT AKELKSVEAI LNQKRPQYIK AKENTSHHLK
KLDLSKKLIT DNEKQCSKQE DGIRALVAEL ADLDRAWKSF EKQMEEKILQ KGRDIELENS
QLDRYKLLKE QVRRKVGIMT QQLEKLQWEQ KAEKERLAFE KRRHGDTQGN LKQIKEQIEE
HKKRIEKLEE YTKTCMDCLE DKKQQEEALK KEIENTKSRM SEVNEELSLI RNELQNAGID
NHEGKRQQKR AEVLEHLKRL YPDSVFGRLL DLCHPIHKKY QLAVTKLFGR YMVAVVASE
KIAKDCIRFL KAERAEPETF LALDYLDIKP INERLREIKG CKMMIDVIKT QFPQLKKVIQ
FVCGNGLVCE TVEEARHIAF GGPERRKAVA LDGTLFLKSG VISGGSSDLK HKALCWDEKE
LHNLDRKRSQ LVQELKELMK TLRKETDLKQ IQTLVQGTNT RLKYSQNELE MIKKKHLATF

YREQSQLQSE LLNIDSQCTM LSEGINKQQQ KIEEFQDKID EVEDDIFQDF CEEIGVENIR
EFENKHVKQQ QENDQKRLEF EKQKTRLNIQ LEYSRNQLKK KLNNIDTLKT TIQKGKEDID
NLKKTEEECL KIVEELMVKQ EQIKEVLATQ SSNIEKIHQ IEEERKKVLA VDREVGKLQK
EVVIIQGSLE QKLEKHNL LDCKVQDIDI SLVLGSLEDI IEMELTETES TQATADIYEK EASIQIDYSP
LREDLKALQS DKEVEAHLTL LLQQVASQEN TLLKTTAPNL RAQENLKTVR DKFQESADVF
EASRKEARIC RQEFEQVKRR RYDAFSQCFE HISVSIDQIY KKLCRNNSAQ AFLSPENPEE
PYLDGISYNC VAPGKRFMPM DNLSGGEKCV AALALLFAVH SFRPAPFFVL DEVDAALDNT
NIGKVSSYIK EQSQEQFQMI IISLKEEFYS KADALIGVYP EHNECMFSHV LTLDSLKYPD
TEDQEGSRSH RKPRVPRVSM SPKSPQSR

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!

Product Details

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.
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

Target:

SMC1B

Alternative Name:

Smc1b ([SMC1B Products](#))

Background:

Structural maintenance of chromosomes protein 1B (SMC protein 1B) (SMC-1-beta) (SMC-1B),FUNCTION: Meiosis-specific component of cohesin complex. Required for the maintenance of meiotic cohesion, but not, or only to a minor extent, for its establishment. Contributes to axial element (AE) formation and the organization of chromatin loops along the AE. Plays a key role in synapsis, recombination and chromosome movements. The cohesin complex is required for the cohesion of sister chromatids after DNA replication. The cohesin complex apparently forms a large proteinaceous ring within which sister chromatids can be trapped. At anaphase, the complex is cleaved and dissociates from chromatin, allowing sister chromatids to segregate. The meiosis-specific cohesin complex probably replaces mitosis specific cohesin complex when it dissociates from chromatin during prophase I. {ECO:0000269|PubMed:11564881, ECO:0000269|PubMed:15146193}.

Molecular Weight:

144.5 kDa

Target Details

UniProt: [Q920F6](#)

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. 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)