Datasheet for ABIN3137039

SMC1A Protein (AA 1-1233) (Strep Tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	SMC1A
Protein Characteristics:	AA 1-1233
Origin:	Mouse
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMC1A protein is labelled with Strep Tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS)

Product Details

Sequence:	MGFLKLIEIE NFKSYKGRQI IGPFQRFTAI IGPNGSGKSN LMDAISFVLG EKTSNLRVKT LRDLIHGAPV GKPAANRAFV SMVYSEEGAE DRTFARVIVG GSSEYKINNK VVQLHEYSEE LEKLGILIKA RNFLVFQGAV ESIAMKNPKE RTALFEEISR SGELAQEYDK RKKEMVKAEE DTQFNYHRKK NIAAERKEAK QEKEEADRYQ RLKDEVVRAQ VQLQLFKLYH NEVEIEKLNK ELASKNKEIE KDKKRMDKVE DELKEKKKEL GKMMREQQQI EKEIKEKDSE LNQKRPQYIK AKENTSHKIK KLEAAKKSLQ NAQKHYKKRK GDMDELEKEM LSVEKARQEF EERMEEESQS QGRDLTLEEN QVKKYHRLKE EASKRAATLA QELEKFNRDQ KADQDRLDLE ERKKVETEAK IKQKLREIEE NQKRIEKLEE YITTSKQSLE EQKKLEGELT EEVEMAKRRI DEINKELNQV MEQLGDARID RQESSRQQRK AEIMESIKRL YPGSVYGRLI DLCQPTQKKY QIAVTKVLGK NMDAIIVDSE KTGRDCIQYI KEQRGEPETF LPLDYLEVKP TDEKLRELKG AKLVIDVIRY EPPHIKKALQ YACGNALVCD NVEDARRIAF GGHQRHKTVA LDGTLFQKSG VISGGASDLK AKARRWDEKA VDKLKEKKER LTEELKEQMK AKRKEAELRQ VQSQAHGLQM RLKYSQSDLE

QTKTRHLALN LQEKSKLESE LANFGPRIND IKRIIQSRER EMKDLKEKMN QVEDEVFEEF CREIGVRNIR EFEEEKVKRQ NEIAKKRLEF ENQKTRLGIQ LDFEKNQLKE DQDKVHMWEQ TVKKDENEIE KLKKEEQRHM KIIDETMAQL QDLKNQHLAK KSEVNDKNHE MEEIRKKLGG ANKEMTHLQK EVTAIETKLE QKRSDRHNLL QACKMQDIKL PLSKGTMDDI SQEEGSSQGE ESVSGSQRTS SIYAREALIE IDYGDLCEDL KDAQAEEEIK QEMNTLQQKL NEQQSVLQRI AAPNMKAMEK LESVRDKFQE TSDEFEAARK RAKKAKQAFE QIKKERFDRF NACFESVATN IDEIYKALSR NSSAQAFLGP ENPEEPYLDG INYNCVAPGK RFRPMDNLSG GEKTVAALAL LFAIHSYKPA PFFVLDEIDA ALDNTNIGKV ANYIKEQSTC NFQAIVISLK EEFYTKAESL IGVYPEQGDC VISKVLTFDL TKYPDANPNP NEQ

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)

Target Details

Target:	SMC1A
Alternative Name:	Smc1a (SMC1A Products)
Background:	Structural maintenance of chromosomes protein 1A (SMC protein 1A) (SMC-1-alpha) (SMC-1A) (Chromosome segregation protein SmcB) (Sb1.8),FUNCTION: Involved in chromosome cohesion during cell cycle and in DNA repair. Involved in DNA repair via its interaction with BRCA1 and its related phosphorylation by ATM, and works as a downstream effector in the ATM/NBS1 branch of S-phase checkpoint (By similarity). Central component of cohesin complex. 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 cohesin complex may also play a role in spindle pole assembly during mitosis. Involved in DNA repair via its interaction with BRCA1 and its related phosphorylation by ATM, or via its phosphorylation by ATR. Works as a downstream effector both in the ATM/NBS1 branch and in the ATR/MSH2 branch of S-phase checkpoint. {ECO:0000250}.
Molecular Weight:	143.2 kDa

Target Details

UniProt:	Q9CU62
Pathways:	Stem Cell Maintenance

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)