

Datasheet for ABIN3137039

SMC1A Protein (AA 1-1233) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	SMC1A
Protein Characteristics:	AA 1-1233
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMC1A protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), Crystallization (Crys), SDS-PAGE (SDS)

Product Details

Sequence:	<p>MGFLKLIIE NFKSYKGRQI IGPFRFTAI IGPNGSGKSN LMDAISVVLG EKTSNLRVKT LRDLIHGAPV GKPAANRAFV SMVYSEEGAE DRTFARVIVG GSSEYKINNK VVQLHEYSEE LEKLGILIKA RNFLVFQAV ESIAMKNPKE RTALFEEISR SGELAQEYDK RKKEMVKAEE DTQFNHYHRKK NIAAERKEAK QEKEEADRYQ RLKDEVVRAQ VQLQLFKLYH NEVEIEKLNK ELASKNKEIE KDKKRMDKVE DELKEKKKEL GKMMREQQOI EKEIKEKDSE LNQKRPQYIK AKENTSHKIK KLEAAKSLQ NAQKHYYKRRK GDMDELEKEM LSVEKARQEF EERMEEESQS QGRDLTLEEN QVKKYHRLKE EASKRAATLA QELEKFNRDQ KADQDRDLLE ERKKVETEA IKQKLREIEE NQKRIELEE YITTSKQSLE EQKKLEGELT EEVEMAKRRI DEINKELNQV MEQLGDARID RQESSRQQRK AEIMESIKRL YPGSVYGRLLI DLCQPTQKKY QIAVTKVLGK NMDAIIVDSE KTGRDCIQYI KEQRGEPETF LPLDYLEVKP TDEKLRELKG AKLVIDVIRY EPPHIKKALQ YACGNALVCD NVEDARRIAF GGHQRHKTVA LDGTLFQKSG VISGGASDLK AKARRWDEKA VDKLKEKKER LTELKEQMK AKRKEAELRQ VQSQAHLQML RLKYSQSDLE</p>
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QTKTRHLALN LQEKSKLESE LANFGPRIND IKRIIQSRER EMKDLKEKMN QVEDEVFEEF
CREIGVRNIR EEEEEKVKRQ NEIAKKRLEF ENQKTRLGIQ LDFEKNQLKE DQDKVHMWEQ
TVKKDENEIE KLKKEEQRHM KIIDETMAQL QDLKNQHLAK KSEVNDKNHE MEEIRKKLGG
ANKEMTHLQK EVTAIETKLE QKRSDRHLL QACKMQDIKL PLSKGTMDDI SQEEGSSQGE
ESVSGSQRTS SIYAREALIE IDYGDLCEDL KDAQAEIEIK QEMNTLQQKL NEQQSVLQRI
AAPNMKAMEK LESVRDKFQE TSDEFEAARK RAKKAKQAFE QIKKERFDRF NACFESVATN
IDEIYKALSR NSSAQAFGLP ENPEEPYLDG INYNVAPGK RFRPMDNLGK GEKTVAALAL
LFAIHSYKPA PFFVLDEIDA ALDNTNIGKV ANYIKEQSTC NFQAIVISLK EEFYTKAESL
IGVYPEQGDC VISKVLTFDL TKYPDANPNP NEQ

Sequence without tag. Tag location is at the discretion of the manufacturer. If you have a special request, please contact us.

Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Smc1a Protein (raised in Insect Cells) purified by multi-step, protein-specific process to ensure crystallization grade.
- 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.

In the unlikely event that the protein cannot be expressed or purified we do not charge anything (other companies might charge you for any performed steps in the expression process for custom-made proteins, e.g. fees might apply for the expression plasmid, the first expression experiments or purification optimization).

When you order this made-to-order protein you will only pay upon receipt of the correctly folded protein. With no financial risk on your end you can rest assured that our experienced protein experts will do everything to make sure that you receive the protein you ordered.

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.

The concentration of the protein is calculated using its specific absorption coefficient. We use the Expasy's protparam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in baculovirus infected SF9 insect cells:

1. In a first purification step, the protein is purified from the cleared cell lysate using three different His-tag capture materials: high yield, EDTA resistant, or DTT resistant. Eluate

Product Details

- 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: >95 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.

Sterility: 0.22 µm filtered

Endotoxin Level: Protein is endotoxin free.

Grade: Crystallography grade

Target Details

Target: SMC1A

Alternative Name: Smc1a ([SMC1A Products](#))

Background: 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: 144.2 kDa Including tag.

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: Protein has not been tested for activity yet. In cases in which it is highly likely that the

Application Details

recombinant protein with the default tag will be insoluble our protein lab may suggest a higher molecular weight tag (e.g. GST-tag) instead to increase solubility. We will discuss all possible options with you in detail to assure that you receive your protein of interest.

Restrictions: For Research Use only

Handling

Format: Liquid

Buffer: 100 mM NaCl, 20 mM Hepes, 10% glycerol. pH value 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: Unlimited (if stored properly)

Images



Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process