

Datasheet for ABIN7555578

## SMC5 Protein (AA 1-1101) (His tag)



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### Overview

Quantity:	1 mg
Target:	SMC5
Protein Characteristics:	AA 1-1101
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This SMC5 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

### Product Details

Purpose:	Custom-made recombinat SMC5 Protein expressed in mammalian cells.
Sequence:	<p>MATPSKKTST PSPQPSKRAL PRDPSSEVPS KRKNSAPQLP LLQSSGPFVE GSIVRISMEN</p> <p>FLTYDICEVS PGPHLNMIVG ANGTGKSSIV CAICLGLAGK PAFMGRADKV GFFVKRGCSR</p> <p>GMVEIELFRA SGNLVITREI DVAKNQSFWF INKSTTQKI VEEKVAALNI QVGNLCQFLP</p> <p>QDKVGEFAKL SKIELLEATE KSIGPPEMHK YHCELKNLRE KEKQLETSCK EKTEYLQKMV</p> <p>QRNERYKQDV ERFYERKRHL DLIEMLEAKR PWVEYENVRQ EYEEVKLVRD RVKEEVRKLLK</p> <p>EGQIPVTCRI EEMENERHNL EARIEKATD IKEASQCKQ KQDVIERKDK HIEELQQALI</p> <p>VKQNEELDRQ RRIGNTRKMI EDLQNELKTT ENCENLQPQI DAITNDLRRRI QDEKALCEGE</p> <p>IIDKRRERET LEKEKKSVDH HIVRFDNLMN QKEDKLRQRF RDTYDAVLWL RNNRDKFKQR</p> <p>VCEPIMLTIN MKDNKNAKYI ENHIPSNDLR AFVFESQEDM EVFLKEVRDN KKLRVNAVIA</p> <p>PKSSYADKAP SRSLNELKQY GFFSYLRELF DAPDPVMSYL CCQYHIHEVP VGTEKTRERI</p> <p>ERVIQETRLK QIYTAEKYV VKTSFYSNKV ISSNTSLKVA QFLTVDLE QRRHLEEQLK</p>

EIHRKLQAVD SGLIALRETS KHLEHKDNEL RQKKKELLER KTKKRQLEQK ISSKLGSLKL  
MEQDTCNLEE EERKASTKIK EINVQKAKLV TELTNLIKIC TSLHIQKVDL ILQNTTVISE  
KNKLESDYMA ASSQLRLTEQ HFIELDENRQ RLLQKCKELM KRARQVCNLG AEQTLPQEYQ  
TQVPTIPNGH NSSLPMVFQD LPNTLDEIDA LLTEERSRAS CFTGLNPTIV QEYTKREEEI  
EQLTEELKGK KVELDQYREN ISQVKERWLN PLKELVEKIN EKFSNFFSSM QCAGEVDLHT  
ENEEDYDKYG IRIRVKFRSS TQLHELTPHH QSGGERSVST MLYLMALQEL NRCPPFRVDE  
INQGMDPINE RRVFEMVVNT ACKENTSQYF FITPKLLQNL PYSEKMTVLF VYNGPHMLEP  
NTWNLKAFQR RRRRITFTQP S **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.**

Characteristics:

Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- 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 try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

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:

SMC5

Alternative Name:

SMC5 ([SMC5 Products](#))

Background:

Structural maintenance of chromosomes protein 5 (SMC protein 5) (SMC-5)  
(hSMC5),FUNCTION: Core component of the SMC5-SMC6 complex, a complex involved in repair of DNA double-strand breaks by homologous recombination. The complex may promote

## Target Details

sister chromatid homologous recombination by recruiting the SMC1-SMC3 cohesin complex to double-strand breaks. The complex is required for telomere maintenance via recombination in ALT (alternative lengthening of telomeres) cell lines and mediates sumoylation of shelterin complex (telosome) components which is proposed to lead to shelterin complex disassembly in ALT-associated PML bodies (APBs). Required for recruitment of telomeres to PML nuclear bodies. Required for sister chromatid cohesion during prometaphase and mitotic progression, the function seems to be independent of SMC6. SMC5-SMC6 complex may prevent transcription of episomal DNA, such as circular viral DNA genome (PubMed:26983541). {ECO:0000269|PubMed:16810316, ECO:0000269|PubMed:17589526, ECO:0000269|PubMed:19502785, ECO:0000269|PubMed:26983541}.

Molecular Weight: 128.8 kDa

UniProt: [Q8IY18](#)

## 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