



Datasheet for ABIN3135227
CTC1 Protein (AA 1-1212) (His tag)



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1 Image

Overview

Quantity:	1 mg
Target:	CTC1
Protein Characteristics:	AA 1-1212
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CTC1 protein is labelled with His tag.
Application:	Crystallization (Crys), ELISA, SDS-PAGE (SDS), Western Blotting (WB)

Product Details

Sequence: MAACRAQPPT SEQAWLEAAQ TFIQETLCPA GKEVDKELTR SVIACVKETW LSQGENQDLT
 LPFSYSFVSV QSLKTHQRLP CESHLSWSQS AYQAWTRGGR PGDGVLPREQ LILGTLVDL
 LGDSEQECS GSLYVRDNTG TLDCELIDLD LSWLGHFLF PSWSYLPSAK RNSLGEHLE
 LWGTPVPVFP LTVSPGPLIP IPVLYPEKAS HLLRYRKKSS IKEINLAGKL VHLSALIITQ
 NKRYFIMTLG ELAQAGSQVS IIVQIPAMV WHRVLRPGRA YVLTQLQVTK TRIHLSIWT
 TIPSSTLKPL RPYVQLELE DLEFSKADLK PPPQPTSSKD SRQEGLVRA SKVLHYLGTV
 TAVLHESAGL YILDGQLILC LAYQKIHLR RVIRPGVCLE LRDVHLLQAV GGATTKPVLA
 LCLHGTVRLQ GFSLKPLTL PSSKVYGASL YEQLVWKCQL GLPLYLWAAK TLEDLIYKLC
 PHVLRCHQFL KQPSPGKPSL GLQLLAPSWD VLIPPGSPMR HAYSEILEEP HNCPLQKYTP
 LQTPYSFPTM LALAEQGHR AWATFDPKAM LPLPEASHLT SCQLNRHLAW SWVCLPSCVF
 QPAQVLLGVL VASSRKGCLE LRDLRGSLPC IPLTESSQPL IDPNLVGCLV RVEKFQLVVE
 REVRSSFPSW EEMGMARFIQ KKQARVYVQF YLADALILPV PRPTFGSEPS QTASSCPEGP

HLGQSRLFLL SHKEALMKRN FCLLPGDSSQ PAKPTLSFHV SGTWLCGTQR KEGSGWSPPE
SLAVESKDQK VFLIFLGSSV RWFPFLYPNQ VYRLVASGPS QTPVFETEGS AGTSRRPLEL
ADCGSCLTVQ EEWTLELGSS QDIPNVLEVP RTLPESLAQ LLGDNSPDSL VSFSAEILSR
ILCEPPLALR RMKPGNAGAI KTGKLTVAL EMDDCEYPPH LDIYIEDPQL PPQIGLLPGA
RVHFSQLEKR ISRSNIVYCC FRSSSTSVQVL SFPPETKASA PLPHIYLAEL LQGDRPPFQA
TTSCHIVYVL SLQILWVCAH CTSICPQGKC SRRDPSCPSQ RAVSQANIRL LVEDGTAEAT
VICRNHLVAR ALGLSPSEWS SILEHARGPG RVALQFTGLG GQTESASKTH EPLTLLRLTL
CTSPFVLRPV KLSFALERRP TDISPREPSR LQQFQCGELP LLTRVNPRLR LVCLSLQEPE
LPNPPQASAA SS

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 Ctc1 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: CTC1

Alternative Name: Ctc1 ([CTC1 Products](#))

Background: Component of the CST complex proposed to act as a specialized replication factor promoting DNA replication under conditions of replication stress or natural replication barriers such as the telomere duplex. The CST complex binds single-stranded DNA with high affinity in a sequence-independent manner, while isolated subunits bind DNA with low affinity by themselves. Initially the CST complex has been proposed to protect telomeres from DNA degradation (PubMed:19854130). However, the CST complex has been shown to be involved in several aspects of telomere replication. The CST complex inhibits telomerase and is involved in telomere length homeostasis, it is proposed to bind to newly telomerase-synthesized 3' overhangs and to terminate telomerase action implicating the association with the ACD:POT1 complex thus interfering with its telomerase stimulation activity. The CST complex is also proposed to be involved in fill-in synthesis of the telomeric C-strand probably implicating recruitment and activation of DNA polymerase alpha. The CST complex facilitates recovery from many forms of exogenous DNA damage, seems to be involved in the re-initiation of DNA replication at repaired forks and/or dormant origins. Involved in telomere maintenance. Involved in genome stability (By similarity). May be involved in telomeric C-strand fill-in during late S/G2 phase (PubMed:22748632). {ECO:0000250|UniProtKB:Q2NKJ3, ECO:0000269|PubMed:19854130, ECO:0000269|PubMed:22748632}.

Molecular Weight: 135.0 kDa Including tag.

UniProt: [Q5SUQ9](#)

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 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