

## Datasheet for ABIN3135365 CTCF Protein (AA 1-736) (His tag)



[Go to Product page](#)

### 1 Image

#### Overview

Quantity:	1 mg
Target:	CTCF
Protein Characteristics:	AA 1-736
Origin:	Mouse
Source:	Insect Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This CTCF protein is labelled with His tag.
Application:	ELISA, Western Blotting (WB), SDS-PAGE (SDS), Crystallization (Crys)

#### Product Details

Sequence:	<p>MEGEAVEAIV EESETFIK GK ERKTYQRRRE GGQEEDACHL PQNQTDGGEV VQDVNSSVQM</p> <p>VMMEQLDPTL LQMKTEVM EG TVAPEAEAAV DDTQIITLQV VNMEEQPINI GELQLVQVPV</p> <p>PVTVPVATTS VEELQGAYEN EVSKEGLAES EPMICHTLPL PEGFQVVKVG ANGEVETLEQ</p> <p>GELPPQEDSS WQKDPDYQPP AKKTKKTKKS KLRYTEEGKD VDVSVYDFEE EQQEGLLSEV</p> <p>NAEKVVGNMK PPKPTKIKKK GVKKTFCCEL CSYTCPRRSN LDRHMKSHTD ERPHKCHLCG</p> <p>RAFRTVTLLR NHLNTHTGTR PHKCPDCDMA FVTSGELVRH RRYKHTHEKP FKCSMCDYAS</p> <p>VEVSKLKRHI RSHTGERPFQ CSLCSYASRD TYKLKRHMRT HSGEKPYECY ICHARFTQSG</p> <p>TMKMHILQKH TENVAKFHCP HCDTVIARKS DLGVHLRKQH SYIEQGKKCR YCDAVFHERY</p> <p>ALIQHQKSHK NEKRFKCDQC DYACRQERHM IMHKRTHTGE KPYACSHCDK TFRQKQLLDM</p> <p>HFKRYHDPNF VPAAFVCSKC GKTFTRRNTM ARHADNCAGP DGVEGENGGE TKKSKRGRKR</p> <p>KMRSKKEDSS DSEENAEPDL DDNEEEEEPA VEIEPEPEPQ PQPPPPQPV APAPPPAKKR</p> <p>RGRPPGRTNQ PKQNPQPTAI QVEDQNTGAI ENIIVEVKKE PDAEPAEGEE EEAQAATTD A</p>
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PNGDLTPEMI LSMMDR

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

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Characteristics:

- Made in Germany - from design to production - by highly experienced protein experts.
- Mouse Ctf 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.

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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 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.

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Purity:

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

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Sterility:

0.22 µm filtered

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Endotoxin Level:

Protein is endotoxin free.

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## Product Details

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Grade: Crystallography grade

## Target Details

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Target: CTCF

Alternative Name: Ctfc ([CTCF Products](#))

Background: Chromatin binding factor that binds to DNA sequence specific sites. Involved in transcriptional regulation by binding to chromatin insulators and preventing interaction between promoter and nearby enhancers and silencers. Acts as transcriptional repressor binding to promoters of vertebrate MYC gene and BAG1 gene. Also binds to the PLK and PIM1 promoters. Acts as a transcriptional activator of APP. Regulates APOA1/C3/A4/A5 gene cluster and controls MHC class II gene expression. Plays an essential role in oocyte and preimplantation embryo development by activating or repressing transcription. Seems to act as tumor suppressor. Plays a critical role in the epigenetic regulation. Participates in the allele-specific gene expression at the imprinted IGF2/H19 gene locus. On the maternal allele, binding within the H19 imprinting control region (ICR) mediates maternally inherited higher-order chromatin conformation to restrict enhancer access to IGF2. Plays a critical role in gene silencing over considerable distances in the genome. Preferentially interacts with unmethylated DNA, preventing spreading of CpG methylation and maintaining methylation-free zones. Inversely, binding to target sites is prevented by CpG methylation. Plays a important role in chromatin remodeling. Can dimerize when it is bound to different DNA sequences, mediating long-range chromatin looping (By similarity). Mediates interchromosomal association between IGF2/H19 and WSB1/NF1 and may direct distant DNA segments to a common transcription factory. Causes local loss of histone acetylation and gain of histone methylation in the beta-globin locus, without affecting transcription. When bound to chromatin, it provides an anchor point for nucleosomes positioning. Seems to be essential for homologous X-chromosome pairing. May participate with Tsix in establishing a regulatable epigenetic switch for X chromosome inactivation. May play a role in preventing the propagation of stable methylation at the escape genes from X-inactivation. Involved in sister chromatid cohesion. Associates with both centromeres and chromosomal arms during metaphase and required for cohesin localization to CTCF sites. Regulates asynchronous replication of IGF2/H19. {ECO:0000250, ECO:0000269|PubMed:11743158, ECO:0000269|PubMed:15669143, ECO:0000269|PubMed:16614224, ECO:0000269|PubMed:16951251, ECO:0000269|PubMed:17329968, ECO:0000269|PubMed:17952071, ECO:0000269|PubMed:18614575}.

## Target Details

Molecular Weight: 84.7 kDa Including tag.

UniProt: [Q61164](#)

## 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