

# Recombinant Human CTCF protein ab153114

[1 References](#)   [1 Image](#)

Description

Product name	Recombinant Human CTCF protein
Expression system	Wheat germ
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human

Sequence

MEGDAVEAMEESETFIKGERKTYQRRREGGQEEDACH  
LPQNQTDGGEV  
VQDVNSSVQMVMMEQLDPTLLQMKTEVMEGTVAPEAEA  
AVDDTQIITLQV  
VNMEEQPINIGELQLVQVPVPVTPVATTSSVEELQGAYEN  
EVSKEGLAES  
EPMICHTLPLPEGFQVVKVGANGEVETLEQGELPPQEDP  
SWQKDPDYQPP  
AKKTKKTKKSKLRYTEEGKDVDVSVYDFEEQQEGLLSE  
VNAEKVVGNMK  
PPKPTKIKKKGVKKTFCQELCSYTCPRRSNLDHRHMKSH  
DERPHKCHLCG  
RAFRTVTLLRNHLNTHGTGTRPHKCPDCDMAFVTSGELVR  
HRRYKHTHEKP  
FKCSMCDYASVEVSKLKRHIRSHTGERPFQCSLCSYASR  
DTYKLKRHMRT  
HSGEKPYECYICHARTQSGTMKMHILQKHTENVAKFHCP  
HCDTVIARKS  
DLGVHLRKQHSYIEQGKKCRYCDAVFHERYALIQHQKSHK  
NEKRFKCDQC  
DYACRQERHMIMHKRTHTGEKPYACSHCDKTFRQKQLLD  
MHFKRYHDPNF  
VPAAFVCSKCGKTFTRRNTMARHADNCAGPDGVEGENG  
GETKKS KRGRKR  
KMRSKKEDSSSENAEPDLDNDEEEPAVEIEPEPEP  
QPVTPAPPPAKK  
RRGRPPGRTNQPKQNQPTAIQVEDQNTGAENIVEVKKEP  
DAEPAEGE EEEAQPAATDAPNGDLTPMILSMMDR

<b>Amino acids</b>	1 to 727
<b>Tags</b>	GST tag N-Terminus

## Specifications

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Our **Abpromise guarantee** covers the use of **ab153114** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<b>Applications</b>	Western blot ELISA
<b>Form</b>	Liquid
<b>Additional notes</b>	

## Preparation and Storage

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<b>Stability and Storage</b>	Shipped on dry ice. Upon delivery aliquot and store at -80°C. Avoid freeze / thaw cycles. pH: 8.00 Constituents: 0.31% Glutathione, 0.79% Tris HCl
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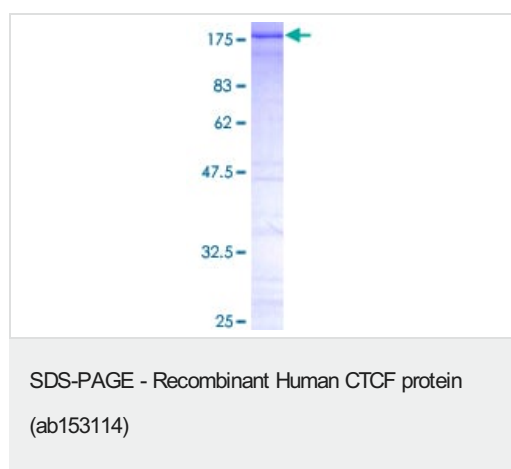
## General Info

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<b>Function</b>	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 to 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. 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.
<b>Tissue specificity</b>	Ubiquitous. Absent in primary spermatocytes.

<b>Sequence similarities</b>	Belongs to the CTCF zinc-finger protein family. Contains 11 C2H2-type zinc fingers.
<b>Domain</b>	The 11 zinc fingers are highly conserved among vertebrates, exhibiting almost identical amino acid sequences. Different subsets or combination of individual zinc fingers gives the ability to CTCF to recognize multiple DNA target sites.
<b>Post-translational modifications</b>	Sumoylated on Lys-74 and Lys-689; sumoylation of CTCF contributes to the repressive function of CTCF on the MYC P2 promoter.
<b>Cellular localization</b>	Nucleus > nucleoplasm. Chromosome. Chromosome > centromere. May translocate to the nucleolus upon cell differentiation. Associates with both centromeres and chromosomal arms during metaphase. Associates with the H19 ICR in mitotic chromosomes. May be preferentially excluded from heterochromatin during interphase.

## Images



ab153114 on a 12.5% SDS-PAGE stained with Coomassie Blue.

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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