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Anti-CTCF Picoband Antibody

Catalog # ABO12181

Product Information

Application	WB, IHC-P
Primary Accession	P49711
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Transcriptional repressor CTCF(CTCF) detection. Tested with WB, IHC-P in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	10664
Other Names	Transcriptional repressor CTCF, 11-zinc finger protein, CCCTC-binding factor, CTCFL paralog, CTCF
Calculated MW	82785
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Human, Mouse, Rat, By Heat Western blot, 0.1-0.5 □g/ml, Human, Rat
Subcellular Localization	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.
Tissue Specificity	Ubiquitous. Absent in primary spermatocytes. .
Source	Eukaryota
Protein Name	Transcriptional repressor CTCF
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human CTCF recombinant protein (Position: K521-R727). Human CTCF shares 94% and 93.1% amino acid (aa) sequence identity with mouse and rat CTCF, respectively.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.
Sequence Similarities	Belongs to the CTCF zinc-finger protein family.

Protein Information

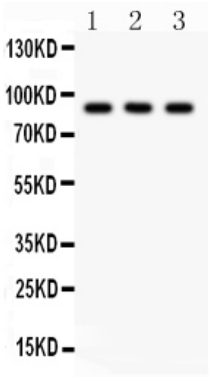
Name	CTCF
Function	Chromatin binding factor that binds to DNA sequence specific sites and regulates the 3D structure of chromatin (PubMed:16949368, PubMed:18347100, PubMed:18654629, PubMed:19322193). Binds together strands of DNA, thus forming chromatin loops, and anchors DNA to cellular structures, such as the nuclear lamina (PubMed:18347100, PubMed:18654629, PubMed:19322193). Defines the boundaries between active and heterochromatic DNA via binding to chromatin insulators, thereby preventing interaction between promoter and nearby enhancers and silencers (PubMed:18347100, PubMed:18654629, PubMed:19322193). Participates in the allele-specific gene expression at the imprinted IGF2/H19 gene locus (PubMed:16107875, PubMed:16815976, PubMed:17827499). 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 (By similarity). Mediates interchromosomal association between IGF2/H19 and WSB1/NF1 and may direct distant DNA segments to a common transcription factory (By similarity). Regulates asynchronous replication of IGF2/H19 (By similarity). Plays a critical role in gene silencing over considerable distances in the genome (By similarity). Preferentially interacts with unmethylated DNA, preventing spreading of CpG methylation and maintaining methylation-free zones (PubMed:18413740). Inversely, binding to target sites is prevented by CpG methylation (PubMed:18413740). Plays an important role in chromatin remodeling (PubMed:18413740). Can dimerize when it is bound to different DNA sequences, mediating long-range chromatin looping (PubMed:12191639). Causes local loss of histone acetylation and gain of histone methylation in the beta-globin locus, without affecting transcription (PubMed:12191639). When bound to chromatin, it provides an anchor point for nucleosomes positioning (PubMed:12191639). Seems to be essential for homologous X-chromosome pairing (By similarity). May participate with Tsix in establishing a regulatable epigenetic switch for X chromosome inactivation (PubMed:11743158). May play a role in preventing the propagation of stable methylation at the escape genes from X-inactivation (PubMed:11743158). Involved in sister chromatid cohesion (PubMed:12191639). Associates with both centromeres and chromosomal arms during metaphase and required for cohesin localization to CTCF sites (PubMed:18550811). Plays a role in the recruitment of CENPE to the pericentromeric/centromeric regions of the chromosome during mitosis (PubMed:26321640). Acts as a transcriptional repressor binding to promoters of vertebrate MYC gene and BAG1 gene (PubMed:18413740, PubMed:8649389, PubMed:9591631). Also binds to the PLK and PIM1 promoters (PubMed:12191639). Acts as a transcriptional activator of APP (PubMed:9407128). Regulates APOA1/C3/A4/A5 gene cluster and controls MHC class II gene expression (PubMed:18347100, PubMed:19322193). Plays an essential role in oocyte and preimplantation embryo development by activating or repressing transcription (By similarity). Seems to act as tumor suppressor (PubMed:12191639).
Cellular Location	Nucleus, nucleoplasm. Chromosome. Chromosome, centromere. Note=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
Tissue Location	Ubiquitous. Absent in primary spermatocytes.

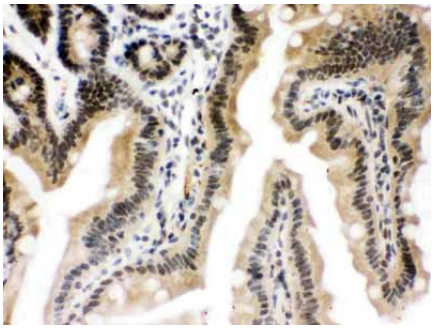
Background

Transcriptional repressor CTCF also known as 11-zinc finger protein or CCCTC-binding factor is a transcription factor that in humans is encoded by the CTCF gene. This gene is a member of the BORIS + CTCF gene family and encodes a transcriptional regulator protein with 11 highly conserved zinc finger (ZF) domains. And this nuclear protein is able to use different combinations of the ZF domains to bind different DNA target sequences and proteins. Depending upon the context of the site, the protein can bind a histone acetyltransferase (HAT)-containing complex and function as a transcriptional activator or bind a histone deacetylase (HDAC)-containing complex and function as a transcriptional repressor. If the protein is bound to a transcriptional insulator element, it can block communication between enhancers and upstream promoters, thereby regulating imprinted expression. Mutations in this gene have been associated with invasive breast cancers, prostate cancers, and Wilms' tumors. Alternatively spliced transcript variants encoding different isoforms have been found for this gene.

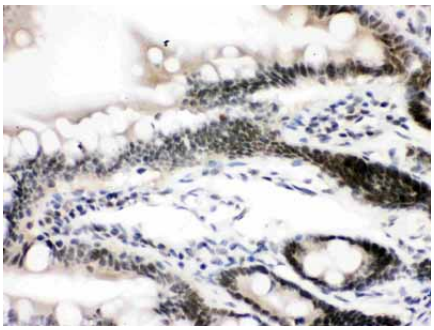
Images



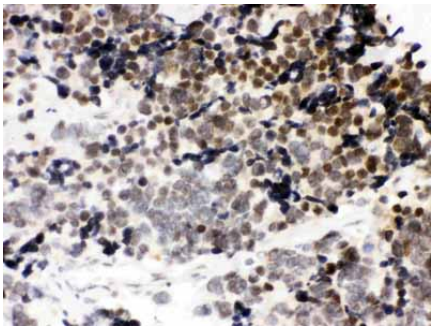
Anti-CTCF Picoband antibody, ABO12181, Western blottingAll lanes: Anti CTCF (ABO12181) at 0.5ug/mlLane 1: Rat Thymus Tissue Lysate at 50ugLane 2: Rat Gaster Tissue Lysate at 50ugLane 3: Human Placenta Tissue Lysate at 50ugPredicted bind size: 88KDObserved bind size: 88KD



Anti-CTCF Picoband antibody, ABO12181, IHC(P)IHC(P): Mouse Intestine Tissue



Anti-CTCF Picoband antibody, ABO12181, IHC(P)IHC(P): Rat Intestine Tissue



Anti-CTCF Picoband antibody, ABO12181, IHC(P)IHC(P): Human Lung Cancer Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.