

Datasheet for ABIN6971556
anti-CTCF antibody (N-Term)

3 Images

[Go to Product page](#)

Overview

Quantity:	100 µL
Target:	CTCF
Binding Specificity:	N-Term
Reactivity:	Human
Host:	Rabbit
Clonality:	Polyclonal
Conjugate:	This CTCF antibody is un-conjugated
Application:	Western Blotting (WB), Immunohistochemistry (IHC), Immunofluorescence (IF), Chromatin Immunoprecipitation (ChIP), Immunocytochemistry (ICC), ChIP DNA-Sequencing (ChIP-seq), Cleavage Under Targets and Tagmentation (CUT&Tag), Supershift Assay (SSA)

Product Details

Immunogen:	This CTCF antibody was raised against a peptide within the N-terminal region of human CTCF.
Isotype:	IgG
Characteristics:	CTCF (CCCTC-binding factor, zinc finger protein) is a 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

Product Details

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 an 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. CTCF antibody (pAb) was raised in a Rabbit host. It has been validated for use in Chromatin Immunoprecipitation, ChIP-Seq, CUT&Tag, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Supershift and Western blot, it has been shown to react with Human samples.

Purification:	Affinity Purified
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Target Details

Target:	CTCF
Alternative Name:	CTCF (CTCF Products)
Molecular Weight:	120 kDa
NCBI Accession:	NP_006556

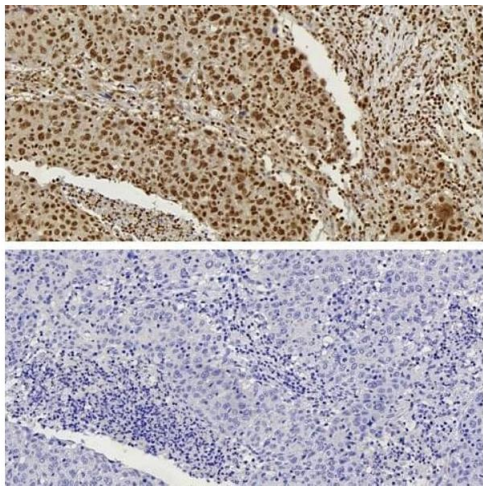
Application Details

Application Notes:	Optimal working dilution should be determined by the investigator.
Restrictions:	For Research Use only

Handling

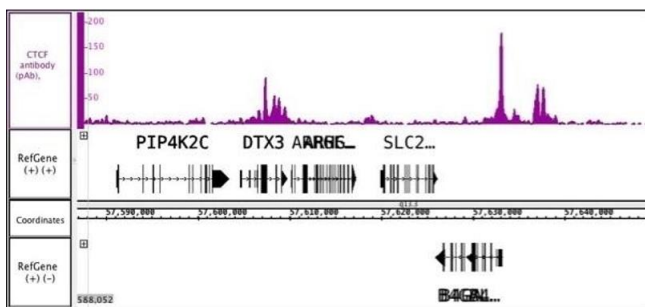
Buffer:	Purified IgG in PBS with 30 % glycerol and 0.035 % sodium azide.
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Avoid repeated freeze/thaw cycles by aliquoting items into single-use fractions for storage at -20°C for up to 2 years. Keep all reagents on ice when not in storage.

Images



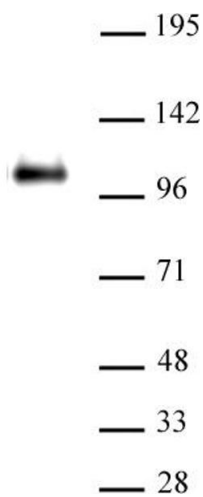
Immunohistochemistry

Image 1. CTCF antibody (pAb) tested by Immunohistochemistry Nuclear staining pattern is detected in Formalin-fixed, paraffin-embedded tissue sections from human breast carcinoma. Top Panel: CTCF antibody at 1:1000 dilution. Bottom Panel: No primary antibody (2nd step antibody alone)



ChIP DNA-Sequencing

Image 2. CTCF antibody (rAb) tested by ChIP-Seq Chromatin immunoprecipitation (ChIP) was performed using the ChIP-IT High Sensitivity Kit with MCF7-SER breast cancer cell line chromatin and 4 µg of CTCF antibody. ChIP DNA was sequenced on the Illumina NextSeq and 15.4 million sequence tags were mapped to identify CTCF binding sites on chromosome 12.



Western Blotting

Image 3. CTCF pAb tested by Western blot. The analysis was performed using 20 µg HeLa nuclear cell extract and CTCF antibody at a 1:1000 dilution.