

Anti-CTCF Antibody (Center)

Catalog Number: M00132-1

About CTCF

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. 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.

Overview

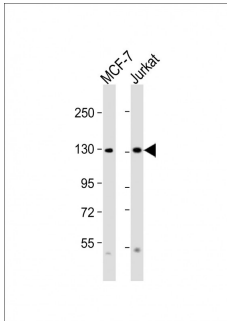
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|----------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Product Name | Anti-CTCF Antibody (Center) |
| Reactive Species | Human |
| Description | Boster Bio Anti-CTCF Antibody (Center) (Catalog # M00132-1). Tested in WB, IHC-P application(s). This antibody reacts with Human. |
| Application | IHC-P, WB |
| Clonality | Polyclonal |
| Formulation | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. |
| Storage Instructions | Maintain refrigerated at 2-8°C for up to 2 weeks. For long-term storage, store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| Host | Rabbit |
| Uniprot ID | P49711 |

Technical Details

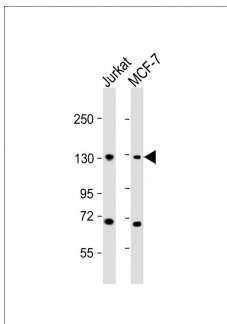
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| Immunogen | This CTCF antibody is generated from a rabbit immunized with a KLH conjugated synthetic peptide |
|-----------|-------------------------------------------------------------------------------------------------|

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|----------------------------|--------------------------------------------------------------------------------------------------|
| | between 334-364 amino acids from the Central region of human CTCF. |
| Predicted Reactive Species | Bovine, Mouse |
| Isotype | Rabbit IgG |
| Purification | This antibody is purified through a protein A column, followed by peptide affinity purification. |
| Suggested Dilutions | WB: 1:2000 IHC-P: 1:25 |

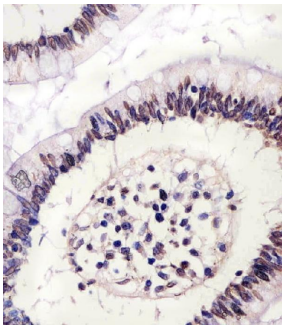
Anti-CTCF Antibody (Center) (M00132-1) Images



All lanes : Anti-CTCF Antibody (Center) at 1:2000 dilution
Lane 1: MCF-7 whole cell lysates
Lane 2: Jurkat whole cell lysates
Lysates/proteins at 20 µg per lane.
Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution
Predicted band size : 83 kDa
Blocking/Dilution buffer: 5% NFD/MTBST.



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M00132-1 staining CTCF in human colon tissue sections by Immunohistochemistry (IHC-P -paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0.5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.

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For Research Use Only. Not for use in diagnostic procedures.