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Product datasheet for TA347107

CTCF Rabbit Polyclonal Antibody

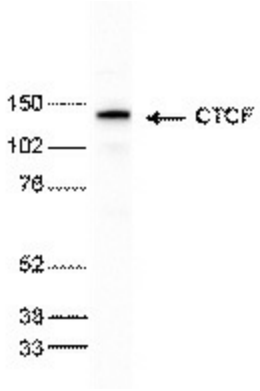
Product data:

Product Type:	Primary Antibodies
Applications:	ELISA, WB
Recommended Dilution:	ChIP/ChIP-seq (1ug/ChIP); ELISA (1:3,000); Western blotting (1:1,000); Western blotting (1:1,000)
Reactivity:	Human
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	The immunogen for anti-CTCF antibody: human CTCF (CCCTC-Binding Factor), using 4 KLH coupled peptides.
Concentration:	lot specific
Purification:	Affinity purified polyclonal antibody in PBS containing 0.05% azide and 0.05% ProClin 300.
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	CCCTC-binding factor
Database Link:	NP_006556 Entrez Gene 10664 Human P49711
Background:	CTCF (UniProt/Swiss-Prot entry P49711) is a transcriptional regulator protein with 11 highly conserved zinc finger domains. By using different combinations of the zinc finger domains, CTCF can bind to different DNA sequences and proteins. As such it can act as both a transcriptional repressor and a transcriptional activator. By binding to transcriptional insulator elements, CTCF can also block communication between enhancers and upstream promoters, thereby regulating imprinted gene expression. CTCF also binds to the H19 imprinting control region and mediates maternally inherited higher-order chromatin conformation to restrict enhancer access to IGF2. Mutations in the CTCF gene have been associated with invasive breast cancers, prostate cancers, and Wilms' tumor.

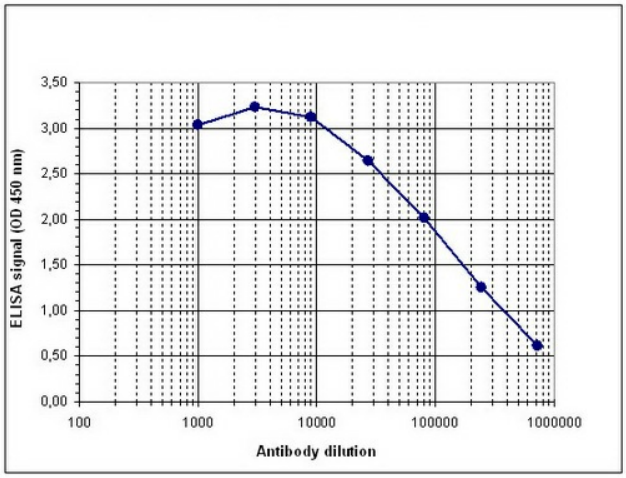
Synonyms: MRD21

Protein Families: Transcription Factors

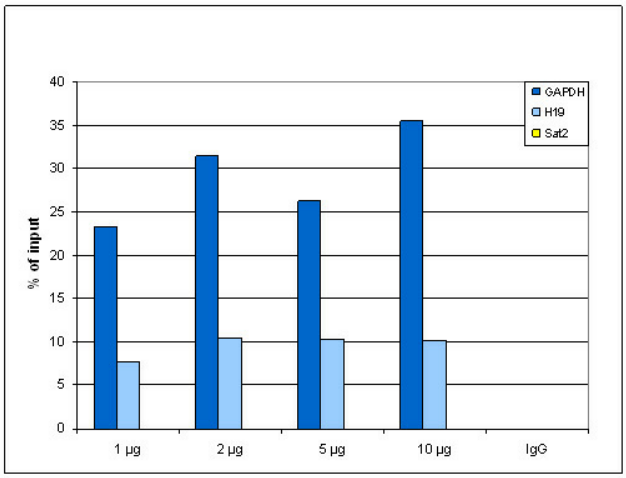
Product images:



WB using the antibody against CTCF diluted 1:1,000 in TBS-Tween containing 5% skimmed milk. The position of the protein of interest is indicated on the right; the marker (in kDa) is shown on the left.

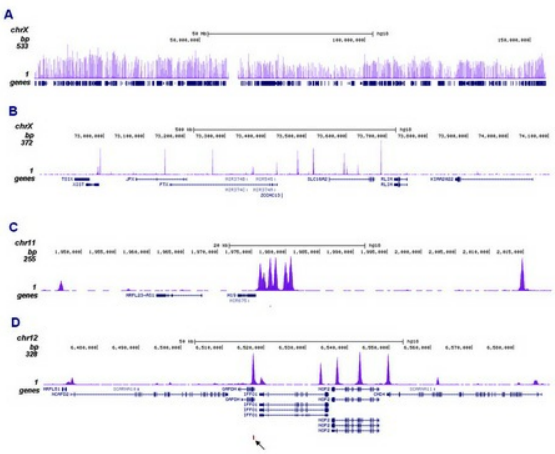


Determination of the antibody titer To determine the titer of the antibody, an ELISA was performed using a serial dilution of the antibody against CTCF. The plates were coated with the peptides used for immunization of the rabbit. By plotting the absorbance against the antibody dilution (Figure 3), the titer of the antibody was estimated to be 1:143,000.



ChIP was performed with the ab against CTCF on sheared chromatin from 4,000,000 HeLa cells. A titration of 1, 2, 5 and 10 ug ab was used. IgG (2 ug/IP) was negative control. qPCR was performed with optimized primers for the H19 imprinting control region, and a specific region in the GAPDH geneas positive controls, and for the Sat2 satellite repeat region, negative control. Image shows the recovery, expressed as a % of input (the relative amount of IP'd DNA compared to input DNA after qPCR).

Figure 2



ChIP was performed on sheared chromatin from 4,000,000 HeLa cells using 1 ug antibody. The IP'd DNA was subsequently analysed on an Illumina HiSeq 2000. The 50 bp tags were aligned to the human genome using the BWA algorithm. Image shows the peak distribution along the complete sequence and a 3 mb region of the X-chromosome and in two regions surrounding the H19 and GAPDH positive control genes, respectively (C, D and E). The position of the amplicon used for ChIP-qPCR is indicated by an arrow.