

CTCF

Reactivity: Human Mouse Rat

Tested applications: WB IHC IP ChIP

Recommended Dilution: WB 1:500 - 1:2000 IHC 1:50 - 1:200 IP 1:20 - 1:50 ChIP 1:20 - 1:100

Calculated MW: 83kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human CTCF

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

f

Synonym:

CTCF

Catalog #: A1133

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 10664

Isotype: IgG

Swiss Prot: P49711

Purity: Affinity purification

For research use only.

Background:

CCCTC-binding factor (CTCF) and its paralog, the Brother of the Regulator of Imprinted Sites (BORIS), are highly conserved transcription factors that regulate transcriptional activation and repression, insulator function, and imprinting control regions (ICRs) (1-4). Although they have divergent amino and carboxy termini, both proteins contain 11 conserved zinc finger domains that work in combination to bind the same DNA elements (1). CTCF is ubiquitously expressed and contributes to transcriptional regulation of cell-growth regulated genes, including c-myc, p19/ARF, p16/INK4A, BRCA1, p53, p27, E2F1, and TERT (1). CTCF also binds to and is required for the enhancer-blocking activity of all known insulator elements and ICRs, including the H19/Igf2, Prader-Willi/Angelman syndrome, and Inactive X-Specific Transcript (XIST) anti-sense loci (5-7). CTCF DNA-binding is sensitive to DNA methylation, a mark that determines selection of the imprinted allele (maternal vs. paternal) (1). The various functions of CTCF are regulated by at least two different post-translational modifications. Poly(ADP-ribosylation) of CTCF is required for insulator function (8). Phosphorylation of Ser612 by protein kinase CK2 facilitates a switch of CTCF from a transcriptional repressor to an activator at the c-myc promoter (9).

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