

CTCF antibody

Catalog No: #38199

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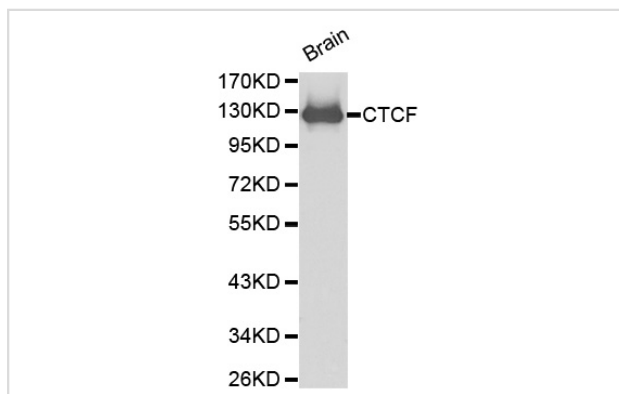
Description

Product Name	CTCF antibody
Host Species	Rabbit
Clonality	Polyclonal
Purification	Antibodies were purified by affinity purification using immunogen.
Applications	WB
Species Reactivity	Hu Ms Rt
Specificity	The antibody detects endogenous level of total CTCF antibody.
Immunogen Type	Recombinant Protein
Immunogen Description	Recombinant protein of human CTCF .
Target Name	CTCF
Other Names	CTCF
Accession No.	Swiss-Prot#: P49711NCBI Gene ID: 10664
SDS-PAGE MW	83kd
Concentration	1.0mg/ml
Formulation	Supplied at 1.0mg/mL in phosphate buffered saline (without Mg ²⁺ and Ca ²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Storage	Store at -20°C

Application Details

Western blotting: □ 1:500 - 1:2000

Images



Western blot analysis of brain cell lysate using CTCF antibody.

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). CTCF mutations or deletions have been found in many breast, prostate, and Wilms tumors (10,11). Expression of BORIS is restricted to spermatocytes and is mutually exclusive of CTCF (3). In cells expressing BORIS, promoters of X-linked cancer-testis antigens like MAGE-1A are demethylated and activated, but methylated and inactive in CTCF-expressing somatic cells (12). Like other testis specific proteins, BORIS is abnormally expressed in different cancers, such as breast cancer, and has a greater affinity than CTCF for DNA binding sites, detracting from CTCF's potential tumor suppressing activity (1,3,13,14).

Note: This product is for in vitro research use only and is not intended for use in humans or animals.