SANTA CRUZ BIOTECHNOLOGY, INC.

CTCF (E-14): sc-15913

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CTCF belongs to the zinc finger transcription factor family and recognizes unusually long and remarkably divergent DNA target sequences to influence expression of many various genes. The DNA-binding domain of CTCF is composed of 11 Zn fingers including 10 that are of C_2H_2 class and one that is of C_2HC class, and they are highly conserved between vertebrate species. CTCF functions as a repressor of the c-Myc gene and as a regulator of lysozyme gene expression. In addition, CTCF associates with the essential activator domain in the promotor region of the β-Amyloid protein precursor (APP) gene to activate transcription of APP. Expression of CTCF upregulates APP expression and thereby enhances synapse formations between primary neurons during development. CTCF is ubiquitously expressed and localized to the nucleus. During terminal differentiation, CTCF is negatively regulated by differential phosphorylation and also by decreases in CTCF mRNA and protein expression.

REFERENCES

1. Klenova, E.M., et al. 1993. CTCF, a conserved nuclear factor required for optimal transcriptional activity of the chicken c-Myc gene, is an 11-Zn-finger protein differentially expressed in multiple forms. Mol. Cell. Biol. 13: 7612-7624.
2. Filippova, G.N., et al. 1996. An exceptionally conserved transcriptional repressor, CTCF, employs different combinations of zinc fingers to bind diverged promoter sequences of avian and mammalian c-Myc oncogenes. Mol. Cell. Biol. 16: 2802-2813.
3. Vostrov, A.A., et al. 1997. The zinc finger protein CTCF binds to the APBβ domain of the amyloid β-protein precursor promoter. Evidence for a role in transcriptional activation. J. Biol. Chem. 272: 33353-33359.

CHROMOSOMAL LOCATION

Genetic locus: CTCF (human) mapping to 16q22.1; Ctcf (mouse) mapping to 8 D3.

SOURCE

CTCF (E-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CTCF of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-15913 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-15913 X, 200 µg/0.1 ml.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

CTCF (E-14) is recommended for detection of CTCF of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CTCF (E-14) is also recommended for detection of CTCF in additional species, including equine, canine and porcine.

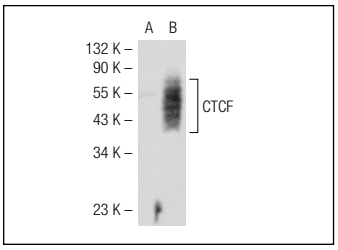
Suitable for use as control antibody for CTCF siRNA (h): sc-35124, CTCF siRNA (m): sc-35125, CTCF shRNA Plasmid (h): sc-35124-SH, CTCF shRNA Plasmid (m): sc-35125-SH, CTCF shRNA (h) Lentiviral Particles: sc-35124-V and CTCF shRNA (m) Lentiviral Particles: sc-35125-V.

CTCF (E-14) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

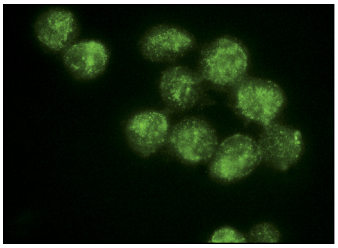
Molecular Weight of CTCF: 150 kDa.

Positive Controls: CTCF (m): 293T Lysate: sc-119494, K-562 nuclear extract: sc-2130 or HeLa nuclear extract: sc-2120.

DATA



CTCF (E-14): sc-15913. Western blot analysis of CTCF expression in non-transfected: sc-117752 (**A**) and mouse CTCF transfected: sc-119494 (**B**) 293T whole cell lysates.



CTCF (E-14): sc-15913. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Tang, J.B., et al. 2006. Identification of a tyrosine-phosphorylated CCCTC-binding nuclear factor in capacitated mouse spermatozoa. Proteomics 6: 4800-4807.

RESEARCH USE

For research use only, not for use in diagnostic procedures.