

CTCF (H-280): sc-28198

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 C₂H₂ class and one that is of C₂HC 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 promoter 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.

CHROMOSOMAL LOCATION

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

SOURCE

CTCF (H-280) is a rabbit polyclonal antibody raised against amino acids 1-280 mapping at the N-terminus 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.

STORAGE

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

APPLICATIONS

CTCF (H-280) 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 (H-280) is also recommended for detection of CTCF in additional species, including equine, canine, bovine, porcine and avian.

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.

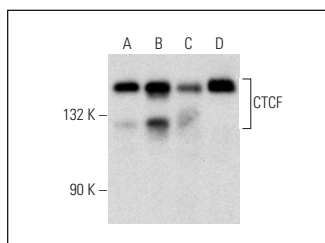
Molecular Weight of CTCF: 150 kDa.

Positive Controls: CCRF-CEM nuclear extract: sc-2146, Jurkat nuclear extract: sc-2132 or HeLa nuclear extract: sc-2120.

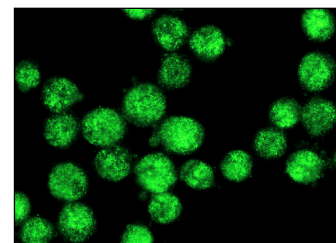
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CTCF (H-280): sc-28198. Western blot analysis of CTCF expression in K-562 (A), Jurkat (B), HeLa (C) and CCRF-CEM (D) nuclear extracts.



CTCF (H-280): sc-28198. Immunofluorescence staining of methanol-fixed K-562 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

1. Meeran, S.M., et al. 2010. Sulforaphane causes epigenetic repression of hTERT expression in human breast cancer cell lines. *PLoS ONE* 5: e11457.
2. Fiorentino, F.P., et al. 2011. CTCF and BORIS regulate Rb2/p130 gene transcription: a novel mechanism and a new paradigm for understanding the biology of lung cancer. *Mol. Cancer Res.* 9: 225-233.
3. Fujita, T. and Fujii, H. 2011. Direct identification of insulator components by insertional chromatin immunoprecipitation. *PLoS ONE* 6: e26109.
4. Macaluso, M., et al. 2012. Integrating role of T antigen, Rb2/p130, CTCF and BORIS in mediating non-canonical endoplasmic reticulum-dependent death pathways triggered by chronic ER stress in mouse medulloblastoma. *Cell Cycle* 11: 1841-1850.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **CTCF (G-8): sc-271474** or **CTCF (B-5): sc-271514**, our highly recommended monoclonal alternatives to CTCF (H-280).