SANTA CRUZ BIOTECHNOLOGY, INC.

# CTF18 (B-7): sc-376074

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

CTF18 (chromosome transmission fidelity factor 18 homolog) is a 975 amino acid protein encoded by the human gene CHTF18. CTF18 is a protein that is structurally related to the Rad24 and RFC (replication factor C) proteins. CTF18 is believed to form a novel RFC complex and functions redundantly with Rad24 in the DNA replication block checkpoint. The CTF18-RFC complex is a seven-subunit structure that consists of the four small subunits of RFC, together with CTF18, DCC1, and CTF8. This RFC complex is responsible for loading the replication clamp PCNA (proliferating cell nuclear antigen) onto DNA and functions in DNA replication and repair. Regulated unloading of PCNA during the progression and termination of DNA replication does not seem to be a function of the CTF18-RFC complex.

## REFERENCES


1. Naiki, T., et al. 2001. Chl12 (CTF18) forms a novel replication factor C-related complex and functions redundantly with Rad24 in the DNA replication checkpoint pathway. Mol. Cell. Biol. 21: 5838-5845.
2. Ohta, S., et al. 2002. A proteomics approach to identify proliferating cell nuclear antigen (PCNA)-binding proteins in human cell lysates. Identification of the human CHL12/RFCs2-5 complex as a novel PCNA-binding protein. J. Biol. Chem. 277: 40362-40367.
3. Bermudez, V.P., et al. 2003. The alternative CTF18-Dcc1-Ctf8-replication factor C complex required for sister chromatid cohesion loads proliferating cell nuclear antigen onto DNA. Proc. Natl. Acad. Sci. USA 100: 10237-10242.
4. Merkle, C.J., et al. 2003. Cloning and characterization of hCTF18, hCTF8, and hDCC1. Human homologs of a *Saccharomyces cerevisiae* complex involved in sister chromatid cohesion establishment. J. Biol. Chem. 278: 30051-30056.
5. Kanellis, P., et al. 2003. Elg1 forms an alternative PCNA-interacting RFC complex required to maintain genome stability. Curr. Biol. 13: 1583-1595.
6. Ogiwara, H., et al. 2007. The INO80 chromatin remodeling complex functions in sister chromatid cohesion. Cell Cycle 6: 1090-1095.


## CHROMOSOMAL LOCATION

Genetic locus: CHTF18 (human) mapping to 16p13.3; Chtf18 (mouse) mapping to 17 A3.3.

## SOURCE

CTF18 (B-7) is a mouse monoclonal antibody raised against amino acids 887-975 mapping at the C-terminus of CTF18 of human origin.

## PRODUCT

Each vial contains 200 µg $IgG_1$ kappa light chain 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

CTF18 (B-7) is recommended for detection of CTF18 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CTF18 siRNA (h): sc-93208, CTF18 siRNA (m): sc-142617, CTF18 shRNA Plasmid (h): sc-93208-SH, CTF18 shRNA Plasmid (m): sc-142617-SH, CTF18 shRNA (h) Lentiviral Particles: sc-93208-V and CTF18 shRNA (m) Lentiviral Particles: sc-142617-V.

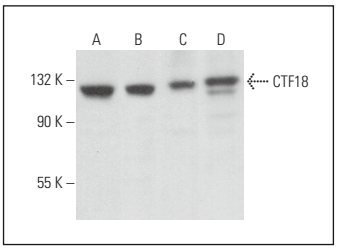
Molecular Weight of CTF18: 107 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, TF-1 cell lysate: sc-2412 or C6 whole cell lysate: sc-364373.

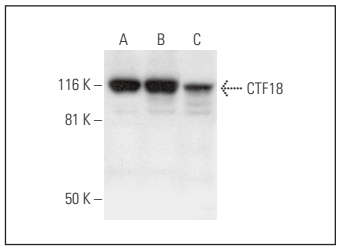
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA




CTF18 (B-7): sc-376074. Western blot analysis of CTF18 expression in SJRH30 (**A**), TF-1 (**B**), RAW 264.7 (**C**) and C6 (**D**) whole cell lysates.




CTF18 (B-7): sc-376074. Western blot analysis of CTF18 expression in HEL 92.1.7 (**A**), K-562 (**B**) and SH-SY5Y (**C**) nuclear extracts.

## RESEARCH USE

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

## PROTOCOLS

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