SANTA CRUZ BIOTECHNOLOGY, INC.

CENP-C (C-6): sc-166099

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis. The evolutionarily conserved centromere protein-C, CENP-C, is a kinetochore assembly protein. CENP-C is located on the fibers of the kinetochore and constitutes a kinetochore organizing center that tightly associates with DNA. CENP-C is necessary for the formation of a functional centromere, which indicates that CENP-C is important for mitotic progression. In addition, CENP-C is lost from centromeres during herpes simplex virus 1 infection, causing substantial structural changes in the kinetochore, which suggests that the structure of CENP-C is regulated during the cell cycle.

REFERENCES

1. Rieder, C.L. and Salmon, E.D. 1998. The vertebrate cell kinetochore and its roles during mitosis. Trends Cell Biol. 8: 310-318.
2. Fukagawa, T., Pendon, C., Morris, J. and Brown, W. 1999. CENP-C is necessary but not sufficient to induce formation of a functional centromere. EMBO J. 18: 4196-4209.
3. Dawe, R.K., Reed, L.M., Yu, H.G., Muszynski, M.G. and Hiatt, E.N. 1999. A maize homolog of mammalian CENP-C is a constitutive component of the inner kinetochore. Plant Cell 11: 1227-1238.
4. Sugimoto, K., Tsutsui, M., AuCoin, D. and Vig, B.K. 1999. Visualization of prekinetochore locus on the centromeric region of highly extended chromatin fibers: does kinetochore autoantigen CENP-C constitute a kinetochore organizing center? Chromosome Res. 7: 9-19.
5. Everett, R.D., Earnshaw, W.C., Findlay, J. and Lomonte, P. 1999. Specific destruction of kinetochore protein CENP-C and disruption of cell division by herpes simplex virus immediate-early protein Vmw110. EMBO J. 18: 1526-1538.

CHROMOSOMAL LOCATION

Genetic locus: CENPC (human) mapping to 4q13.2; Cenpc1 (mouse) mapping to 5 E1.

SOURCE

CENP-C (C-6) is a mouse monoclonal antibody raised against amino acids 644-943 mapping at the C-terminus of CENP-C of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CENP-C (C-6) is available conjugated to agarose (sc-166099 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-166099 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166099 PE), fluorescein (sc-166099 FITC), Alexa Fluor® 488 (sc-166099 AF488), Alexa Fluor® 546 (sc-166099 AF546), Alexa Fluor® 594 (sc-166099 AF594) or Alexa Fluor® 647 (sc-166099 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166099 AF680) or Alexa Fluor® 790 (sc-166099 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

CENP-C (C-6) is recommended for detection of CENP-C 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 CENP-C siRNA (h): sc-37559, CENP-C siRNA (m): sc-37560, CENP-C shRNA Plasmid (h): sc-37559-SH, CENP-C shRNA Plasmid (m): sc-37560-SH, CENP-C shRNA (h) Lentiviral Particles: sc-37559-V and CENP-C shRNA (m) Lentiviral Particles: sc-37560-V.

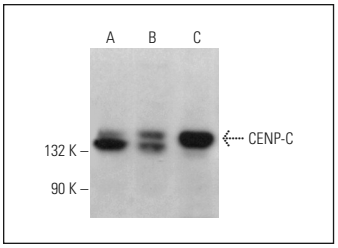
Molecular Weight of CENP-C: 140 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795, Jurkat whole cell lysate: sc-2204 or HeLa nuclear extract: sc-2120.

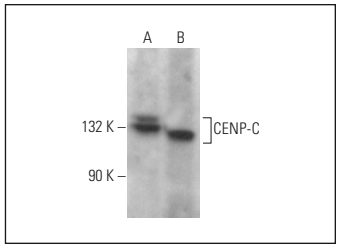
RECOMMENDED SUPPORT REAGENTS

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



CENP-C (C-6): sc-166099. Western blot analysis of CENP-C expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates and mouse brain tissue extract (**C**).



CENP-C (C-6): sc-166099. Western blot analysis of CENP-C expression in HeLa nuclear extract (**A**) and SP2/0 whole cell lysate (**B**).

STORAGE

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

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.