SANTA CRUZ BIOTECHNOLOGY, INC.

CENP-A (H-50): sc-22787

BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis. The Centromere Protein-A, CENP-A, is a Histone H3-like protein that contains a C-terminal H3-like domain, which is required for centromere localization of CENP-A, and an antigenic N-terminal domain. CENP-A, originally isolated from HeLa cells, is essential for kinetochore targeting of CENP-C. In the presence of DNA CENP-A forms an octa-meric complex with histones H4, H2A, H2B. CENP-A specifically localizes to active centromeres and is a component of specialized centromeric nucleosomes, on which kinetochores are assembled. CENP-A is essential for nucleosomal packaging of centromeric DNA at interphase and functions as a centromere formation marker on the chromosome.

REFERENCES

1. Rieder, C.L., et al. 1998. The vertebrate cell kinetochore and its roles during mitosis. Trends Cell. Biol. 8: 310-318.
2. Choo, K.H. 2000. Centromerization. Trends Cell. Biol. 10: 182-188.
3. Muro, Y., et al. 2000. Autoepitopes on autoantigen centromere protein-A (CENP-A) are restricted to the N-terminal region, which has no homology with Histone H3. Clin. Exp. Immunol. 120: 218-223.
4. Howman, E.V., et al. 2000. Early disruption of centromeric chromatin organization in centromere protein A (Cenpa) null mice. Proc. Natl. Acad. Sci. USA 97: 1148-1153.

CHROMOSOMAL LOCATION

Genetic locus: CENPA (human) mapping to 2p22.3

SOURCE

CENP-A (H-50) is a rabbit polyclonal antibody raised against amino acids 1-50 mapping at the N-terminus of CENP-A 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.

APPLICATIONS

CENP-A (H-50) is recommended for detection of CENP-A of 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).

Suitable for use as control antibody for CENP-A siRNA (h): sc-37555, CENP-A shRNA Plasmid (h): sc-37555-SH and CENP-A shRNA (h) Lentiviral Particles: sc-37555-V.

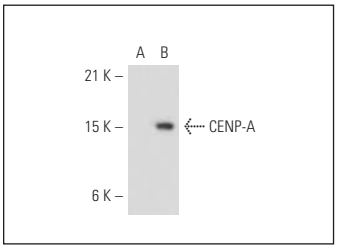
Molecular Weight of CENP-A: 17 kDa.

Positive Controls: CENP-A (h): 293 Lysate: sc-110471 or CENP-A (h): CHO Lysate: sc-110448 .

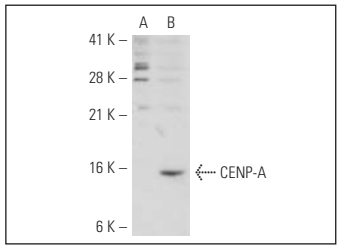
RECOMMENDED SECONDARY REAGENTS

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



CENP-A (H-50): sc-22787. Western blot analysis of CENP-A expression in non-transfected: sc-117750 (**A**) and human CENP-A transfected: sc-110448 (**B**) CHO whole cell lysates.



CENP-A (H-50): sc-22787. Western blot analysis of CENP-A expression in non-transfected: sc-110760 (**A**) and human CENP-A transfected: sc-110471 (**B**) 293 whole cell lysates.

SELECT PRODUCT CITATIONS

1. Lee, J.H., et al. 2009. Chromatin analysis of occluded genes. Hum. Mol. Genet. 18: 2567-2574.

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 or our catalog for detailed protocols and support products.