SANTA CRUZ BIOTECHNOLOGY, INC.

# CENP-A (M-85): sc-22814

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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. 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.
3. Howman, E.V., et al. 2000. Early disruption of centromeric chromatin organization in centromere protein-A (CENP-A) null mice. Proc. Natl. Acad. Sci. USA 97: 1148-1153.
4. Yoda, K., et al. 2000. Human centromere protein-A (CENP-A) can replace Histone H3 in nucleosome reconstitution *in vitro*. Proc. Natl. Acad. Sci. USA 97: 7266-7271.


## CHROMOSOMAL LOCATION

Genetic locus: Cenpa (mouse) mapping to 5 B1.

## SOURCE

CENP-A (M-85) is a rabbit polyclonal antibody raised against amino acids 1-85 mapping at the N-terminus of CENP-A of mouse 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 (M-85) is recommended for detection of CENP-A of mouse and rat 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 (m): sc-37556, CENP-A shRNA Plasmid (m): sc-37556-SH and CENP-A shRNA (m) Lentiviral Particles: sc-37556-V.

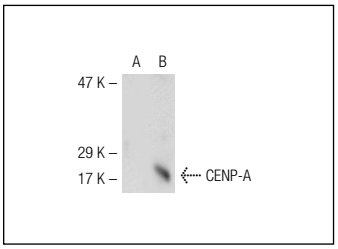
Molecular Weight of CENP-A: 17 kDa.

Positive Controls: CENP-A (m): 293T Lysate : sc-119162.

## 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 (M-85): sc-22814. Western blot analysis of CENP-A expression in non-transfected: sc-117752 (**A**) and mouse CENP-A transfected: sc-119162 (**B**) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS


1. Korhonen, H.M., et al. 2011. Dicer is required for haploid male germ cell differentiation in mice. PLoS ONE 6: e24821.


## 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.