

CENP-H (G-9): sc-365222

BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis. Both centromere proteins CENP-B and CENP-H are contained in the centromeric heterochromatin between kinetochores, and are involved in maintaining sister chromatid cohesion. The highly dispersed CENP-B promotes and maintains the joining of DNA satellites in the centromere. CENP-B targets centromeric α -DNA and protects it from digestion by nucleases as well as preventing DNase or restriction enzyme digestion from affecting the morphology of centromeres. CENP-H contains a coiled-coil structure and a nuclear localization signal. CENP-H is specifically and constitutively localized to kinetochores and plays a role in the organization and function of kinetochores throughout the cell cycle.

REFERENCES

1. Cooke, C.A., et al. 1990. CENP-B: a major human centromere protein located beneath the kinetochore. *J. Cell Biol.* 110: 1475-1488.
2. Rieder, C.L., et al. 1998. The vertebrate cell kinetochore and its roles during mitosis. *Trends Cell Biol.* 8: 310-318.
3. Barbosa-Cisneros, O., et al. 1998. Localization of the centromere protein CENP-B using scleroderma sera and evidence for a role in centromere survival. *Rev. Rhum. Engl. Ed.* 65: 15-20.
4. Sugata, N., et al. 1999. Characterization of a novel kinetochore protein, CENP-H. *J. Biol. Chem.* 274: 27343-27346.
5. Choo, K.H. 2000. Centromerization. *Trends Cell Biol.* 10: 182-188.
6. Izuta, H., et al. 2006. Comprehensive analysis of the ICEN (interphase centromere complex) components enriched in the CENP-A chromatin of human cells. *Genes Cells* 11: 673-684.

CHROMOSOMAL LOCATION

Genetic locus: CENPH (human) mapping to 5q13.2.

SOURCE

CENP-H (G-9) is a mouse monoclonal antibody raised against amino acids 1-247 representing full length CENP-H of human origin.

PRODUCT

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

CENP-H (G-9) is available conjugated to agarose (sc-365222 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365222 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365222 PE), fluorescein (sc-365222 FITC), Alexa Fluor® 488 (sc-365222 AF488), Alexa Fluor® 546 (sc-365222 AF546), Alexa Fluor® 594 (sc-365222 AF594) or Alexa Fluor® 647 (sc-365222 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365222 AF680) or Alexa Fluor® 790 (sc-365222 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

CENP-H (G-9) is recommended for detection of CENP-H of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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-H siRNA (h): sc-37565, CENP-H shRNA Plasmid (h): sc-37565-SH and CENP-H shRNA (h) Lentiviral Particles: sc-37565-V.

Molecular Weight of CENP-H: 33 kDa.

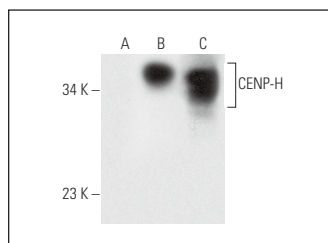
Positive Controls: Jurkat whole cell lysate: sc-2204, HeLa whole cell lysate: sc-2200 or CENP-H (h2): 293T Lysate: sc-113785.

RECOMMENDED SUPPORT REAGENTS

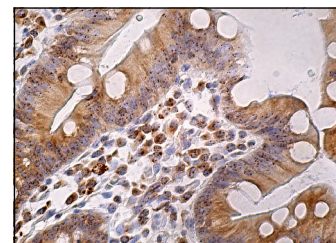
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CENP-H (G-9): sc-365222. Western blot analysis of CENP-H expression in non-transfected 293T: sc-117752 (A), human CENP-H transfected 293T: sc-113785 (B) and Jurkat (C) whole cell lysates.



CENP-H (G-9): sc-365222. Immunoperoxidase staining of formalin fixed, paraffin-embedded human small intestine tissue showing punctate nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Nishimura, K., et al. 2020. A super-sensitive auxin-inducible degron system with an engineered auxin-TIR1 pair. *Nucleic Acids Res.* 48: e108.

STORAGE

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

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