

CENP-H (Q-20): sc-11297

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., Bernat, R.L. and Earnshaw, W.C. 1990. CENP-B: a major human centromere protein located beneath the kinetochore. *J. Cell Biol.* 110: 1475-1488.
2. Rieder, C.L. and Salmon, E.D. 1998. The vertebrate cell kinetochore and its roles during mitosis. *Trends Cell. Biol.* 8: 310-318.
3. Barbosa-Cisneros, O., Avalos-Diaz, E., Vera, O., Moreno, J. and Herrera-Esparza, R. 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., Munekata, E. and Todokoro, K. 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. Amor, D.J., Kalitsis, P., Sumer, H. and Choo, K.H. 2004. Building the centromere: from foundation proteins to 3D organization. *Trends Cell Biol.* 14: 359-368.
7. Mikami, Y., Hori, T., Kimura, H. and Fukagawa, T. 2005. The functional region of CENP-H interacts with the Nuf2 complex that localizes to centromere during mitosis. *Mol. Cell. Biol.* 25: 1958-1970.

CHROMOSOMAL LOCATION

Genetic locus: CENPH (human) mapping to 5q13.2; Cenph (mouse) mapping to 13 D1.

SOURCE

CENP-H (Q-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CENP-H of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-11297 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CENP-H (Q-20) is recommended for detection of CENP-H of mouse, rat and, to a lesser extent, 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) 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 siRNA (m): sc-37566, CENP-H shRNA Plasmid (h): sc-37565-SH, CENP-H shRNA Plasmid (m): sc-37566-SH, CENP-H shRNA (h) Lentiviral Particles: sc-37565-V and CENP-H shRNA (m) Lentiviral Particles: sc-37566-V.

Molecular Weight of CENP-H: 33 kDa.

Positive Controls: NIH/3T3 + PMA nuclear extract: sc-2125.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.



Try **CENP-H (G-9): sc-365222** or **CENP-H (5): sc-136403**, our highly recommended monoclonal alternatives to CENP-H (Q-20).