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-H 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


CHROMOSOMAL LOCATION

Genetic locus: CENPB (human) mapping to 20p13; Cenpb (mouse) mapping to 2 F1.

CENP-B (C-10) is a mouse monoclonal antibody raised against amino acids 535-599 mapping at the C-terminus of CENP-B of human origin.

PRODUCT

Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. CENP-B (C-10) is available conjugated to agarose (sc-376392 AC), 500 µg/0.25 ml agarose in 1 ml, for IP, to HRP (sc-376392 HRP), 200 µg/ml, for WB, HCP, and ELISA; to either phycoerythrin (sc-376392 PE), fluorescein (sc-376392 FITC), Alexa Fluor® 488 (sc-376392 AF488), Alexa Fluor® 546 (sc-376392 AF546), Alexa Fluor® 594 (sc-376392 AF594) or Alexa Fluor® 647 (sc-376392 AF647), 200 µg/ml, for WB (RGB), IF, HC, and FCM, and to either Alexa Fluor® 680 (sc-376392 AF680) or Alexa Fluor® 790 (sc-376392 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF, and FCM.

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APPLICATIONS

CENP-B (C-10) is recommended for detection of CENP-B 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).


Molecular Weight of CENP-B: 80 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or CENP-B (h): 293T Lysate: sc-116535.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG HRP: sc-516102 or m-IgG HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000). 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG BP-FITC: sc-516140 or m-IgG 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-B (C-10): sc-376392. Western blot analysis of CENP-B expression in non-transfected: sc-116535 (A) and human CENP-B transfected: sc-117752 (B) 293T whole cell lysates.

CENP-B (C-10): sc-376392. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). CENP-B (C-10) Alexa Fluor® 488: sc-376392 AF488. Direct immunofluorescence staining of formalin-fixed NIH3T3 cells showing nuclear localization. Blocked with UltraCruz® Blocking Reagent: sc-516214 (B).

RESEARCH USE

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

PROTOCOLS

See our website at www.scbt.com for detailed protocols and support products.