

CENP-B (Y-17): sc-11281

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. 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.
3. Rieder, C.L., et al. 1998. The vertebrate cell kinetochore and its roles during mitosis. *Trends Cell Biol.* 8: 310-318.
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. Ohzeki, J., et al. 2002. CENP-B box is required for *de novo* centromere chromatin assembly on human alphoid DNA. *J. Cell Biol.* 159: 765-775.
7. Suzuki, N., et al. 2004. CENP-B interacts with CENP-C domains containing Mif2 regions responsible for centromere localization. *J. Biol. Chem.* 279: 5934-5946.

CHROMOSOMAL LOCATION

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

SOURCE

CENP-B (Y-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of CENP-B of human 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-11281 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

CENP-B (Y-17) is recommended for detection of CENP-B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CENP-B (Y-17) is also recommended for detection of CENP-B in additional species, including equine, canine and bovine.

Suitable for use as control antibody for CENP-B siRNA (h): sc-37557, CENP-B siRNA (m): sc-37558, CENP-B shRNA Plasmid (h): sc-37557-SH, CENP-B shRNA Plasmid (m): sc-37558-SH, CENP-B shRNA (h) Lentiviral Particles: sc-37557-V and CENP-B shRNA (m) Lentiviral Particles: sc-37558-V.

Molecular Weight of CENP-B: 80 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or A-431 whole cell lysate: sc-2201.

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) 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.

SELECT PRODUCT CITATIONS

1. Tomonaga, T., et al. 2003. Overexpression and mistargeting of centromere protein-A in human primary colorectal cancer. *Cancer Res.* 63: 3511-3516.

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-B (F-4): sc-376283** or **CENP-B (2D-7): sc-32285**, our highly recommended monoclonal alternatives to CENP-B (Y-17).