

CENP-E (H-300): sc-22790

BACKGROUND

A replicated chromosome includes two kinetochores that control chromosome segregation during mitosis. Centromere Protein E, CENP-E, is a kinetochore motor protein that specifies kinetochore binding in mitosis. Both CENP-E and CENP-F are expressed during mitosis where they mediate the G₂ to M phase checkpoint. CENP-E is also expressed in high levels during meiosis I and meiosis II where it localizes to the fibrous corona and outer plate of kinetochores on the meiotic chromosomes. CENP-E colocalizes with hBUBR1, a BUB-related kinase until mid-anaphase. After the first polar body emission, CENP-E localizes to the spindle-midzone, separating from hBUBR1 after mid-anaphase.

REFERENCES

1. Rieder, C.L., et al. 1998. The vertebrate cell kinetochore and its roles during mitosis. *Trends Cell Biol.* 8: 310-318.
2. Chan, G.K., et al. 1998. Characterization of the kinetochore binding domain of CENP-E reveals interactions with the kinetochore proteins CENP-F and hBUBR1. *J. Cell Biol.* 143: 49-63.
3. Ashar, H.R., et al. 2000. Farnesyl transferase inhibitors block the farnesylation of CENP-E and CENP-F and alter the association of CENP-E with the microtubules. *J. Biol. Chem.* 275: 30451-30457.

CHROMOSOMAL LOCATION

Genetic locus: CENPE (human) mapping to 4q24; Cenpe (mouse) mapping to 3 G3.

SOURCE

CENP-E (H-300) is a rabbit polyclonal antibody raised against amino acids 2364-2663 mapping at the C-terminus of CENP-E of human 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-E (H-300) is recommended for detection of CENP-E of mouse, rat and human 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), 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-E siRNA (h): sc-37561, CENP-E siRNA (m): sc-37562, CENP-E shRNA Plasmid (h): sc-37561-SH, CENP-E shRNA Plasmid (m): sc-37562-SH, CENP-E shRNA (h) Lentiviral Particles: sc-37561-V and CENP-E shRNA (m) Lentiviral Particles: sc-37562-V.

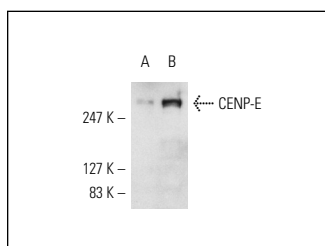
Molecular Weight of CENP-E: 312 kDa.

Positive Controls: A-431 + Calyculin A cell lysate: sc-2260, K-562 nuclear extract: sc-2130 or A-431 nuclear extract: sc-2122.

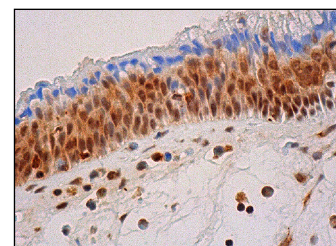
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC:sc-2018 rabbit IgG Staining Systems.

DATA



CENP-E (H-300): sc-22790. Western blot analysis of CENP-E expression in untreated (A) and calyculin A treated (B) A-431 whole cell lysates.



CENP-E (H-300): sc-22790. Immunoperoxidase staining of formalin fixed, paraffin-embedded human nasopharynx tissue showing nuclear and cytoplasmic staining of respiratory epithelial cells.

SELECT PRODUCT CITATIONS

1. Perdoni, F., et al. 2009. Distribution of centromeric proteins and PARP-1 during mitosis and apoptosis. *Ann. N.Y. Acad. Sci.* 1171: 32-37.

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-E (C-5): sc-376685** or **CENP-E (mAb177): sc-47745**, our highly recommended monoclonal alternatives to CENP-E (H-300).