

CENP-E (C-19): sc-11291

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.
4. Lee, J., et al. 2000. Specific regulation of CENP-E and kinetochores during meiosis I/meiosis II transition in pig oocytes. *Mol. Reprod. Dev.* 56: 51-62.
5. Choo, K.H. 2000. Centromerization. *Trends Cell. Biol.* 10: 182-188.

CHROMOSOMAL LOCATION

Genetic locus: CENPE (human) mapping to 4q24.

SOURCE

CENP-E (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near 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.

Blocking peptide available for competition studies, sc-11291 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CENP-E (C-19) is recommended for detection of CENP-E of 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).

Suitable for use as control antibody for CENP-E siRNA (h): sc-37561, CENP-E shRNA Plasmid (h): sc-37561-SH and CENP-E shRNA (h) Lentiviral Particles: sc-37561-V.

Molecular Weight of CENP-E: 312 kDa.

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. Kurasawa, Y., et al. 2004. Essential roles of KIF4 and its binding partner PRC1 in organized central spindle midzone formation. *EMBO J.* 23: 3237-3248.

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.

MONOS
Satisfaction
Guaranteed

Try **CENP-E (C-5): sc-376685** or **CENP-E (mAb177): sc-47745**, our highly recommended monoclonal alternatives to CENP-E (C-19).