### SANTA CRUZ BIOTECHNOLOGY, INC.

# CENP-E (P-15): sc-30942



#### 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 G<sub>2</sub> 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 co-localizes 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. and Salmon, E.D. 1998. The vertebrate cell kinetochore and its roles during mitosis. Trends Cell. Biol. 8: 310-318.
- Chan, G.K., Schaar, B.T. and Yen, T.J. 1998. Characterization of the kinetochore binding domain of CENP-E reveals interactions with the kinetochore protreins CENP-F and hBUBR1. J. Cell. Biol. 143: 49-63.

#### CHROMOSOMAL LOCATION

Genetic locus: CENPE (human) mapping to 4q25; Cenpe (mouse) mapping to 3 H2.

#### SOURCE

CENP-E (P-15) 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  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-30942 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

CENP-E (P-15) 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CENP-E (P-15) is also recommended for detection of CENP-E in additional species, including equine and canine.

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, A-431 nuclear extract: sc-2122 or K-562 nuclear extract: sc-2130.

#### **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.

#### DATA



CENP-E (P-15): sc-30942. Western blot analysis of CENP-E expression in K-562 (A) and A-431 (B) nuclear extracts and calyculin-treated A-431 whole cell lysate (C).

#### **STORAGE**

Store at 4° C, \*\*D0 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 Satisfation Guaranteed

Try CENP-E (C-5): sc-376685 or CENP-E (mAb177): sc-47745, our highly recommended monoclonal alternatives to CENP-E (P-15).