SANTA CRUZ BIOTECHNOLOGY, INC.

Rec8 (E-18): sc-15152

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cohesins are a group of conserved proteins that are responsible for cohesion between replicated sister chromatids during mitosis and meiosis and are implicated in double-strand break repair and meiotic recombination. The Rec8 subfamily is composed of meiosis-specific proteins involved in sister chromatid cohesion. The cohesin protein Rec8 is required for sister chromatid cohesion and homolog pairing during meiosis, and it localizes to approximately 100 foci per prophase nucleus. Rec8 is present in an unphosphorylated form early in meiotic prophase but is phosphorylated prior to meiosis I. Rec8 appears in the centromeres and adjacent chromosome arms during the pre-meiotic S phase. Centromeric Rec8 persists throughout meiosis I and disappears at anaphase of meiosis II.

REFERENCES

1. Bhatt, A.M., et al. 1999. The DIF1 gene of *Arabidopsis* is required for meiotic chromosome segregation and belongs to the Rec8/RAD21 cohesin gene family. Plant J. 19: 463-472.
2. Watanabe, Y., et al. 1999. Cohesin Rec8 is required for reductional chromosome segregation at meiosis. Nature 400: 461-464.
3. Krawchuk, M.D., et al. 1999. Meiotic chromosome dynamics dependent upon the Rec8^{+}, Rec10^{+} and Rec11^{+} genes of the fission yeast *Schizosaccharomyces pombe*. Genetics 153: 57-68.
4. Parisi, S., et al. 1999. Rec8p, a meiotic recombination and sister chromatid cohesion phosphoprotein of the Rad21p family conserved from fission yeast to humans. Mol. Cell. Biol. 19: 3515-3528.
5. Toth, A., et al. 2000. Functional genomics identifies monopolin: a kinetochore protein required for segregation of homologs during meiosis I. Cell 103: 1155-1168.
6. Watanabe, Y., et al. 2001. Pre-meiotic S phase is linked to reductional chromosome segregation and recombination. Nature 409: 359-363.

CHROMOSOMAL LOCATION

Genetic locus: REC8 (human) mapping to 14q12; Rec8l1 (mouse) mapping to 14 C3.

SOURCE

Rec8 (E-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Rec8 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-15152 P, (100 µg 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

Rec8 (E-18) is recommended for detection of Rec8 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).

Rec8 (E-18) is also recommended for detection of Rec8 in additional species, including equine.

Suitable for use as control antibody for Rec8 siRNA (h): sc-106878, Rec8 siRNA (m): sc-152787, Rec8 shRNA Plasmid (h): sc-106878-SH, Rec8 shRNA Plasmid (m): sc-152787-SH, Rec8 shRNA (h) Lentiviral Particles: sc-106878-V and Rec8 shRNA (m) Lentiviral Particles: sc-152787-V.

Molecular Weight of Rec8: 95/87 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. Huo, L.J., et al. 2006. Degradation of securin in mouse and pig oocytes is dependent on ubiquitin-proteasome pathway and is required for proteolysis of the cohesion subunit, Rec8, at the metaphase-to-anaphase transition. Front. Biosci. 11: 2193-2202.
2. Erenpreisa, J., et al. 2009. The role of meiotic cohesin REC8 in chromosome segregation in γ irradiation-induced endopolyploid tumour cells. Exp. Cell Res. 315: 2593-2603.

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.