SANTA CRUZ BIOTECHNOLOGY, INC.

MEI-1 (cI-20): sc-32419

BACKGROUND

The *Caenorhabditis elegans* early embryo is widely used to study the regulation of microtubule-related processes. A microtubule-severing complex, katanin, is encoded by the MEI-1 and MEL-2 genes and is solely required for oocyte meiotic spindle formation. MEI-1 and MEI-2 localize to the polar ends of meiotic spindle microtubules and meiotic chromatin. The katanin complex must be inactivated before the first mitotic cleavage. During the meiosis-to-mitosis transition, degradation of MEI-1 requires the function of both Cullin 3 (CUL-3), which promotes ubiquitination of MEI-1, and MEL-26, a substrate specific adaptor of CUL-3. MEL-26 mediates cell separation and cleavage furrow ingression during the *C. elegans* early mitotic divisions.

REFERENCES

1. Srayko, M., et al. 2000. MEI-1/MEI-2 katanin-like microtubule severing activity is required for *Caenorhabditis elegans* meiosis. Genes Dev. 14: 1072-1084.
2. Quintin, S., et al. 2003. The mbk-2 kinase is required for inactivation of MEI-1/katanin in the one-cell *Caenorhabditis elegans* embryo. EMBO Rep. 4: 1175-1181.
3. Furukawa, M., et al. 2003. Targeting of protein ubiquitination by BTB-Cullin 3-Roc1 ubiquitin ligases. Nat. Cell Biol. 5: 1001-1007.
4. Lu, C., et al. 2004. The *Caenorhabditis elegans* microtubule-severing complex MEI-1/MEI-2 katanin interacts differently with two superficially redundant β-Tubulin isotypes. Mol. Biol. Cell. 15: 142-50.
5. Lu, C., et al. 2005. Mutations of a redundant α-Tubulin gene affect *Caenorhabditis elegans* early embryonic cleavage via MEI-1/katanin-dependent and -independent pathways. Genetics 170: 115-26.
6. Luke-Glaser, S., et al. 2005. The BTB protein MEL-26 promotes cytokinesis in *C. elegans* by a CUL-3-independent mechanism. Curr. Biol. 15: 1605-1615.

SOURCE

MEI-1 (cI-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MEI-1 of *C. elegans* 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-32419 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.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

MEI-1 (cI-20) is recommended for detection of MEI-1 of *Caenorhabditis elegans* 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).

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.