SANTA CRUZ BIOTECHNOLOGY, INC.

MEX-1 (cN-18): sc-9239

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell proliferation and development are carefully controlled in *C. elegans*, with each cell following a nearly invariant pattern of differentiation. Vulval development in particular provides a useful model for studying how cell fate is determined. In addition to cell signaling pathways such as Notch and Ras pathways, the establishment of cell polarity and the asymmetric distribution of certain receptors are also critical for proper cell fate determination. In *Caenorhabditis elegans*, the separation of soma and germline occurs through a series of asymmetrical divisions, in which embryonic germline blastomeres divide unequally to produce one somatic daughter and one germline daughter. PIE-1 functions to control germline blastomeres from somatic differentiation and may be a general transcriptional repressor. MEX-1 mutations have been shown to prevent the formation of germ cells and cause inappropriate patterns of somatic cell differentiation. Maternal SKN-1 is required to specify the fate of ventral blastomeres in the early *C. elegans* embryo, and postembryonically for the development of the intestine.

REFERENCES

1. Bowerman, B., Eaton, B.A. and Priess, J.R. 1992. SKN-1, a maternally expressed gene required to specify the fate of ventral blastomeres in the early *C. elegans* embryo. Cell 68: 1061-1075.
2. Sundaram, M. and Han, M. 1996. Control and integration of cell signaling pathways during *C. elegans* vulval development. Bioessays 18: 473-480.
3. Sommer, R.J. and Sternberg, P.W. 1996. Evolution of nematode vulval fate patterning. Dev. Biol. 173: 396-407.
4. Mello, C.C., Schubert, C., Draper, B., Zhang, W., Lobel, R. and Priess, J.R. 1996. The PIE-1 protein and germline specification in *C. elegans* embryos. Nature 382: 710-712.
5. Seydoux, G., Mello, C.C., Pettitt, J., Wood, W.B., Priess, J.R. and Fire, A. 1996. Repression of gene expression in the embryonic germ lineage of *C. elegans*. Nature 382: 713-716.
6. Kornfeld, K. 1997. Vulval development in *Caenorhabditis elegans*. Trends Genet. 13: 55-61.
7. Guedes, S. and Priess, J.R. 1997. The *C. elegans* MEX-1 protein is present in germline blastomeres and is a P granule component. Development 124: 731-739.

SOURCE

MEX-1 (cN-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of MEX-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-9239 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

MEX-1 (cN-18) is recommended for detection of MEX-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.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

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