SANTA CRUZ BIOTECHNOLOGY, INC.

EGL-27 (cA-16): sc-12200

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. EGL-27 is a *C. elegans* homologue of a chromatin regulatory factor that determines sex-specific cell fusion patterns. EGL-27, like EGR-1, has similarity to MTA1, a mammalian factor overexpressed in metastatic cells. EGR-1 and EGL-27 are members of the NURD chromatin remodeling complex and inhibit vulval development through the synMuvA pathway. EGL-27 is implicated in the diversification of cell fates along the anteroposterior axis, which suggests that chromatin reorganization is necessary for controlling HOX gene expression and Hox protein function.

REFERENCES

1. Sundaram, M. and Han, M. 1996. Control and integration of cell signaling pathways during *C. elegans* vulval development. Bioessays 18: 473-480.
2. Sommer, R.J. and Sternberg, P.W. 1997. Evolution of nematode vulval fate patterning. Dev. Biol. 173: 396-407.
3. Kornfeld, K. 1997. Vulval development in *Caenorhabditis elegans*. Trends Genet. 13: 55-61.
4. Herman, M.A., Ch'ng, Q., Hettenbach, S.M., Ratliff, T.M., Kenyon, C. and Herman, R.K. 1999. EGL-27 is similar to a metastasis-associated factor and controls cell polarity and cell migration in *C. elegans*. Development 126: 1055-1064.
5. Solari, F., Bateman, A. and Ahringer, J. 1999. The *Caenorhabditis elegans* genes EGL-27 and EGR-1 are similar to MTA1, a member of a chromatin regulatory complex, and are redundantly required for embryonic patterning. Development 126: 2483-2494.
6. Ch'ng, Q. and Kenyon, C. 1999. EGL-27 generates anteroposterior patterns of cell fusion in *C. elegans* by regulating HOX gene expression and Hox protein function. Development 126: 3303-3312.
7. Solari, F. and Ahringer, J. 2000. NURD-complex genes antagonise Ras-induced vulval development in *Caenorhabditis elegans*. Curr. Biol. 10: 223-226.

SOURCE

EGL-27 (cA-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EGL-27 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-12200 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EGL-27 (cA-16) is recommended for detection of EGL-27 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.

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.