SANTA CRUZ BIOTECHNOLOGY, INC.

EGL-15 (cN-14): sc-9211

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. Cell signaling pathways such as Notch and Ras pathways are critical for proper cell fate determination. LET-60, a member of the *C. elegans* Ras superfamily, coordinates with BAR-1, the β-catenin homologue, and acts as a switch between vulval and hypodermal cell fates during the inductive signaling pathway that initiates vulva formation. LET-23 is a tyrosine kinase receptor required for the induction of the *C. elegans* vulva, survival past the L1 stage, hermaphrodite fertility and male spicule development. LET-23 is the homolog of the EGFR in *C. elegans,* and is preferentially localized to the basolateral membranes of the six vulval precursor cells. EGL-15 encodes a receptor tyrosine kinase of the fibroblast growth factor receptor (FGFR) subfamily and is required for the normal cell migrations of the sex myoblasts in *C. elegans.*

REFERENCES

1. Beitel, G.J., et al. 1990. *Caenorhabditis elegans* Ras gene LET-60 acts as a switch in the pathway of vulval induction. Nature 348: 503-509.
2. DeVore, D.L., et al. 1995. An FGF receptor signaling pathway is required for the normal cell migrations of the sex myoblasts in *C. elegans* hermaphrodites. Cell 83: 611-620.
3. Sakai, T., et al. 1996. Genomic structure and 5' regulatory regions of the LET-23 gene in the nematode *C. elegans*. J. Mol. Biol. 256: 548-555.
4. Sundaram, M., et al. 1996. Control and integration of cell signaling pathways during *C. elegans* vulval development. Bioessays 18: 473-480.
5. Sommer, R.J., et al. 1996. Evolution of nematode vulval fate patterning. Dev. Biol. 173: 396-407.
6. Kornfeld, K. 1997. Vulval development in *Caenorhabditis elegans*. Trends Genet. 13: 55-61.
7. Eisenmann, D.M., et al. 1998. The β-catenin homolog BAR-1 and LET-60 RAS coordinately regulate the HOX gene LIN-39 during *Caenorhabditis elegans* vulval development. Development 125: 3667-3680.
8. Kaech, S.M., et al. 1998. The LIN-2/LIN-7/LIN-10 complex mediates basolateral membrane localization of the *C. elegans* EGF receptor LET-23 in vulval epithelial cells. Cell 94: 761-771.

SOURCE

EGL-15 (cN-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of EGL-15 of *C. elegans* origin.

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.

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-9211 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EGL-15 (cN-14) is recommended for detection of EGL-15 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.

SELECT PRODUCT CITATIONS

1. Cui, P.H., et al. 2010. Impaired transactivation of the human CYP2J2 arachidonic acid epoxygenase gene in HepG2 cells subjected to nitrative stress. Br. J. Pharmacol. 159: 1440-1449.
2. Chen, F., et al. 2011. Occludin is regulated by epidermal growth factor receptor activation in brain endothelial cells and brains of mice with acute liver failure. Hepatology 53: 1294-1305.
3. Chen, F., et al. 2013. TIMP-1 attenuates blood-brain barrier permeability in mice with acute liver failure. J. Cereb. Blood Flow Metab. 33: 1041-1049.

PROTOCOLS

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