LIN-39 (cN-19): sc-9215



The Power to Question

BACKGROUND

A variety of growth factor signaling molecules have been shown to regulate C. elegans development, including members of the EGF, FGF and TGFβ superfamilies. These factors bind to specific receptors and transduce extracellular signals to the nucleus. Receptor tyrosine kinase/Ras pathways also play a critical role in cell signaling and are responsible for proper vulval development. The LIN proteins, LIN-15A and LIN-15B, LIN-35, LIN-53 and LIN-39, regulate an intercellular signalling process that induces formation of the hermaphrodite vulva in C. elegans by acting to prevent the activation of a receptor tyrosine kinase/Ras signaling pathway. Mutants lacking both LIN-15A and LIN-15B have multiple, ectopic pseudo-vulvae resulting from the overproduction of vulval cells, whereas mutants defective in only one LIN-15 protein appear wild-type. LIN-35 encodes a protein similar to the tumor suppressor Rb and the closely related proteins p107 and p130. LIN-53 encodes a protein similar to RbAp48, a mammalian protein that binds to Rb. LIN-39 has been shown to correspond to homeobox genes which function as homeotic genes along the anterior-posterior body axis of *C. elegans*.

REFERENCES

- Horvitz, H.R., Sternberg, P.W., Greenwald, I.S., Fixsen, W. and Ellis, H.M. 1983. Mutations that affect neural cell lineages and cell fates during the development of the nematode *Caenorhabditis elegans*. Cold Spring Harb. Symp. Quant. Biol. 48: 453-463.
- 2. Carpenter, G. 1993. EGF: new tricks for an old growth factor. Curr. Opin. Cell. Biol. 5: 261-264.
- 3. Burglin, T.R. and Ruvkun, G. 1993. The *Caenorhabditis elegans* homeobox gene cluster. Curr. Opin. Genet. Dev. 3: 615-620.
- 4. Huang, L.S., Tzou, P. and Sternberg, P.W. 1994. The LIN-15 locus encodes two negative regulators of *Caenorhabditis elegans* vulval development. Mol. Biol. Cell. 5: 395-411.
- 5. Clark, S.G., Lu, X. and Horvitz, H.R. 1994.The *Caenorhabditis elegans* locus LIN-15, a negative regulator of a tyrosine kinase signaling pathway, encodes two different proteins. Genetics 137: 987-997.
- Sternberg, P.W., Lesa, G., Lee, J., Katz, W.S., Yoon, C., Clandinin, T.R., Huang, L.S., Chamberlin, H.M. and Jongeward, G. 1995. LET-23-mediated signal transduction during *Caenorhabditis elegans* development. Mol. Reprod. Dev. 42: 523-528.
- Lu, X. and Horvitz, H.R. 1998. LIN-35 and LIN-53, two genes that antagonize a *C. elegans* Ras pathway, encode proteins similar to Rb and its binding protein RbAp48. Cell 95: 981-991.

SOURCE

LIN-39 (cN-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of LIN-39 of *Caenorhabditis elegans* origin.

STORAGE

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

PRODUCT

Each vial contains 200 μg lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9215 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LIN-39 (cN-19) is recommended for detection of LIN-39 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) with UltraCruz™ Mounting Medium: sc-24941.

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.

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3800 fax 831.457.3801 **Europe** +00800 4573 8000 49 6221 4503 0 **www.scbt.com**