

LIN37 (C-14): sc-161793

BACKGROUND

A variety of growth factor signaling molecules have been shown to regulate *C. elegans* development, including members of the EGF, FGF and TGF β super-families. 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 regulate an intercellular signaling 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. LIN37 is a 246 amino acid protein that is a mammalian homolog of the *C. elegans* Lin-37 protein. LIN37 functions as a component of the DREAM complex (also known as the LINC complex), which is comprised of several proteins, all of which work in concert to repress cell cycle-dependent genes.

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.
- Carpenter, G. 1993. EGF: new tricks for an old growth factor. Curr. Opin. Cell. Biol. 5: 261-264.
- Kayne, P.S. and Sternberg, P.W. 1995. Ras pathways in *Caenorhabditis elegans*. Curr. Opin. Genet. Dev. 5: 38-43.
- 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.
- Korenjak, M., Taylor-Harding, B., Binne, U.K., Satterlee, J.S., Stevaux, O., Aasland, R., White-Cooper, H., Dyson, N. and Brehm, A. 2004. Native E2F/RBF complexes contain Myb-interacting proteins and repress transcription of developmentally controlled E2F target genes. Cell 119: 181-193.
- Schmit, F., Korenjak, M., Mannefeld, M., Schmitt, K., Franke, C., von Eyss, B., Gargica, S., Hänel, F., Brehm, A. and Gaubatz, S. 2007. LINC, a human complex that is related to pRB-containing complexes in invertebrates regulates the expression of G₂/M genes. Cell Cycle 6: 1903-1913.
- Litovchick, L., Sadasivam, S., Florens, L., Zhu, X., Swanson, S.K., Velmurugan, S., Chen, R., Washburn, M.P., Liu, X.S. and DeCaprio, J.A. 2007. Evolutionarily conserved multisubunit RBL2/p130 and E2F4 protein complex represses human cell cycle-dependent genes in quiescence. Mol. Cell 26: 539-551.
- Schmit, F., Cremer, S. and Gaubatz, S. 2009. LIN54 is an essential core subunit of the DREAM/LINC complex that binds to the cdc2 promoter in a sequence-specific manner. FEBS J. 276: 5703-5716.
- Sours-Brothers, S., Ma, R. and Koulen, P. 2009. Ca²⁺-sensitive transcriptional regulation: direct DNA interaction by DREAM. Front. Biosci. 14: 1851-1856.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: LIN37 (human) mapping to 19q13.2; Lin37 (mouse) mapping to 7 B1.

SOURCE

LIN37 (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LIN37 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-161793 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LIN37 (C-14) is recommended for detection of LIN37 of mouse, rat and human 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).

Suitable for use as control antibody for LIN37 siRNA (h): sc-97565, LIN37 siRNA (m): sc-146733, LIN37 shRNA Plasmid (h): sc-97565-SH, LIN37 shRNA Plasmid (m): sc-146733-SH, LIN37 shRNA (h) Lentiviral Particles: sc-97565-V and LIN37 shRNA (m) Lentiviral Particles: sc-146733-V.

Molecular Weight of LIN37: 28 kDa.

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.

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.