SANTA CRUZ BIOTECHNOLOGY, INC.

# LIN37 siRNA (m): sc-146733

## 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 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


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2. Carpenter, G. 1993. EGF: new tricks for an old growth factor. Curr. Opin. Cell. Biol. 5: 261-264.
3. Kayne, P.S. and Sternberg, P.W. 1995. Ras pathways in *Caenorhabditis elegans*. Curr. Opin. Genet. Dev. 5: 38-43.
4. Sternberg, P.W., et al. 1995. LET-23-mediated signal transduction during *Caenorhabditis elegans* development. Mol. Reprod. Dev. 42: 523-528.
5. Korenjak, M., et al. 2004. Native E2F/RBF complexes contain Myb-interacting proteins and repress transcription of developmentally controlled E2F target genes. Cell 119: 181-193.
6. Schmit, F., et al. 2007. LINC, a human complex that is related to pRB-containing complexes in invertebrates regulates the expression of $G_2$/M genes. Cell Cycle 6: 1903-1913.
7. Litovchick, L., et al. 2007. Evolutionarily conserved multisubunit RBL2/p130 and E2F4 protein complex represses human cell cycle-dependent genes in quiescence. Mol. Cell 26: 539-551.
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## CHROMOSOMAL LOCATION

Genetic locus: Lin37 (mouse) mapping to 7 B1.

## PRODUCT

LIN37 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LIN37 shRNA Plasmid (m): sc-146733-SH and LIN37 shRNA (m) Lentiviral Particles: sc-146733-V as alternate gene silencing products.

## RESEARCH USE

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

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

LIN37 siRNA (m) is recommended for the inhibition of LIN37 expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

LIN37 (G-3): sc-515686 is recommended as a control antibody for monitoring of LIN37 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LIN37 gene expression knockdown using RT-PCR Primer: LIN37 (m)-PR: sc-146733-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

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