

LIN37 (G-3): sc-515686

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. LIN37 is encoded by a gene located on human chromosome 19q13.12.

REFERENCES

1. Horvitz, H.R., et al. 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. 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.

CHROMOSOMAL LOCATION

Genetic locus: LIN37 (human) mapping to 19q13.12; Lin37 (mouse) mapping to 7 B1.

SOURCE

LIN37 (G-3) is a mouse monoclonal antibody raised against amino acids 1-101 mapping at the N-terminus of LIN37 of human origin.

PRODUCT

Each vial contains 200 μ g IgG $_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIN37 (G-3) is available conjugated to agarose (sc-515686 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515686 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515686 PE), fluorescein (sc-515686 FITC), Alexa Fluor[®] 488 (sc-515686 AF488), Alexa Fluor[®] 546 (sc-515686 AF546), Alexa Fluor[®] 594 (sc-515686 AF594) or Alexa Fluor[®] 647 (sc-515686 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515686 AF680) or Alexa Fluor[®] 790 (sc-515686 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

LIN37 (G-3) is recommended for detection of LIN37 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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.

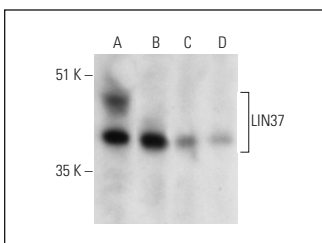
Molecular Weight of LIN37: 28 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or HEK293 whole cell lysate: sc-45136.

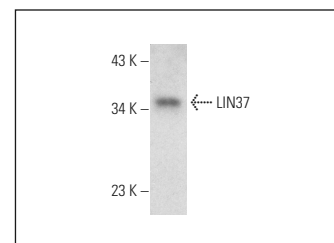
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



LIN37 (G-3): sc-515686. Western blot analysis of LIN37 expression in MCF7 (A), HeLa (B), HEK293 (C) and AML-193 (D) whole cell lysates.



LIN37 (G-3): sc-515686. Western blot analysis of LIN37 expression in BYDP whole cell lysate.

SELECT PRODUCT CITATIONS

1. Chen, B.R., et al. 2021. LIN37-DREAM prevents DNA end resection and homologous recombination at DNA double-strand breaks in quiescent cells. Elife 10: e68466.
2. Kumari, R., et al. 2021. Simultaneous expression of MMB-FOXO1 complex components enables efficient bypass of senescence. Sci. Rep. 11: 21506.

STORAGE

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