SANTA CRUZ BIOTECHNOLOGY, INC.

LIN-41 (E-1): sc-393352

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

LIN-41, also called tripartite motif-containing 71 (TRIM71), which was first identified in *Caenorhabditis elegans*, is responsible for the timing of cell fate determination. By encoding microRNAs (miRNAs), the heterochronic genes LET-7 and LIN-4 downregulate the gene encoding LIN-41. The miRNAs bind to six complementary sites on the 3' untranslated region (UTR) of the LIN-41 gene. This downregulation positively regulates the timing of the expression of LIN-29, an adult specification transcription factor. Null mutations in the gene encoding LIN-41 lead to the premature development of adult tissues during larval stages. Although LIN-41 is expressed in many different embryonic cell types, it is most highly expressed in the developing limb buds, tail buds and brachial arches.

REFERENCES

1. Slack, F.J., et al. 2000. The LIN-41 RBCC gene acts in the *C. elegans* heterochronic pathway between the LET-7 regulatory RNA and the LIN-29 transcription factor. Mol. Cell 5: 659-669.
2. Vella, M.C., et al. 2004. The *C. elegans* microRNA LET-7 binds to imperfect LET-7 complementary sites from the LIN-41 3'UTR. Genes Dev. 18: 132-137.
3. Lancman, J.J., et al. 2005. Analysis of the regulation of LIN-41 during chick and mouse limb development. Dev. Dyn. 234: 948-960.
4. Schulman, B.R., et al. 2005. Reciprocal expression of LIN-41 and the microRNAs LET-7 and mir-125 during mouse embryogenesis. Dev. Dyn. 234: 1046-1054.
5. Bagga, S., et al. 2005. Regulation by LET-7 and LIN-41 miRNAs results in target mRNA degradation. Cell 122: 553-563.

CHROMOSOMAL LOCATION

Genetic locus: TRIM71 (human) mapping to 3p22.3; Trim71 (mouse) mapping to 9 F3.

SOURCE

LIN-41 (E-1) is a mouse monoclonal antibody raised against amino acids 264-532 mapping within an internal region of LIN-41 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

LIN-41 (E-1) is available conjugated to agarose (sc-393352 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393352 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393352 PE), fluorescein (sc-393352 FITC), Alexa Fluor® 488 (sc-393352 AF488), Alexa Fluor® 546 (sc-393352 AF546), Alexa Fluor® 594 (sc-393352 AF594) or Alexa Fluor® 647 (sc-393352 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393352 AF680) or Alexa Fluor® 790 (sc-393352 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

LIN-41 (E-1) is recommended for detection of LIN-41 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 LIN-41 siRNA (h): sc-72328, LIN-41 siRNA (m): sc-72329, LIN-41 shRNA Plasmid (h): sc-72328-SH, LIN-41 shRNA Plasmid (m): sc-72329-SH, LIN-41 shRNA (h) Lentiviral Particles: sc-72328-V and LIN-41 shRNA (m) Lentiviral Particles: sc-72329-V.

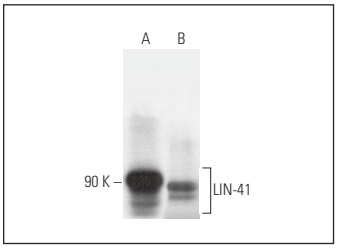
Molecular Weight of LIN-41: 93 kDa.

Positive Controls: NTERA-2 cl.D1 whole cell lysate: sc-364181 or human testis extract: sc-363781.

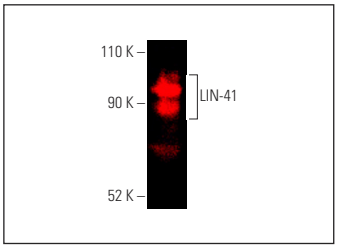
RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



LIN-41 (E-1): sc-393352. Western blot analysis of LIN-41 expression in NTERA-2 cl.D1 whole cell lysate (**A**) and human testis tissue extract (**B**).



LIN-41 (E-1): sc-393352. Near-Infrared western blot analysis of LIN-41 expression in NTERA-2 cl.D1 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_{2b} BP-CFL 790: sc-542750.

SELECT PRODUCT CITATIONS

1. Chen, Y., et al. 2019. Ubiquitin ligase TRIM71 suppresses ovarian tumorigenesis by degrading mutant p53. Cell Death Dis. 10: 737.

STORAGE

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