SANTA CRUZ BIOTECHNOLOGY, INC.

LIN-41 (C-16): sc-54033

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-4 miRNAs results in target mRNA degradation. Cell 122: 553-563.
6. Kanamoto, T., et al. 2006. Cloning and regulation of the vertebrate homologue of lin-41 that functions as a heterochronic gene in *Caenorhabditis elegans*. Dev. Dyn. 235: 1142-1149.
7. Del Rio-Albrechtsen, T., et al. 2006. Novel gain-of-function alleles demonstrate a role for the heterochronic gene lin-41 in *C. elegans* male tail tip morphogenesis. Dev. Biol. 297: 74-86.

CHROMOSOMAL LOCATION

Genetic locus: TRIM71 (human) mapping to 3p22.3; Lin41 (mouse) mapping to 9 F3.

SOURCE

LIN-41 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of LIN-41 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-54033 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LIN-41 (C-16) is recommended for detection of LIN-41 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).

LIN-41 (C-16) is also recommended for detection of LIN-41 in additional species, including equine, canine, bovine and avian.

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.

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.

STORAGE

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

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.