SANTA CRUZ BIOTECHNOLOGY, INC.

LIN-28 (S-15): sc-54032

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

LIN-28 is a highly conserved, RNA-binding, cytoplasmic protein. It consists of a cold shock domain and retroviral-type (CCHC) zinc finger motifs that were first identified in *Caenorhabditis elegans*. LIN-28 controls the timing of events during embryonic development and is readily expressed in embryos, embryonic stem cells and embryonal carcinoma cells. The presence of LIN-28 persists in some adult tissues including cardiac and skeletal muscle. In differentiating myoblasts, LIN-28 increases protein sysnthesis efficiency and binds to the growth and differentiation factor IGF-II.

REFERENCES

1. Moss, E.G., et al. 1997. The cold shock domain protein LIN-28 controls developmental timing in *C. elegans* and is regulated by the LIN-4 RNA. Cell 88: 637-646.
2. Seggerson, K., et al. 2002. Two genetic circuits repress the *Caenorhabditis elegans* heterochronic gene LIN-28 after translation initiation. Dev. Biol. 243: 215-225.
3. Moss, E.G. and Tang, L. 2003. Conservation of the heterochronic regulator LIN-28, its developmental expression and microRNA complementary sites. Dev. Biol. 258: 432-442.
4. Yang, D.H. and Moss, E.G. 2003. Temporally regulated expression of LIN-28 in diverse tissues of the developing mouse. Gene Expr. Patterns 3: 719-726.
5. Sempere, L.F., et al. 2004. Expression profiling of mammalian microRNAs uncovers a subset of brain-expressed microRNAs with possible roles in murine and human neuronal differentiation. Genome Biol. 5: R13.
6. Wu, L. and Belasco, J.G. 2005. MicroRNA regulation of the mammalian LIN-28 gene during neuronal differentiation of embryonal carcinoma cells. Mol. Cell. Biol. 25: 9198-9208.
7. Guo, Y., et al. 2006. Identification and characterization of LIN-28 homolog B (LIN-28B) in human hepatocellular carcinoma. Gene 384: 51-61.

CHROMOSOMAL LOCATION

Genetic locus: LIN28A (human) mapping to1p36.11, LIN28B (human) mapping to 6q16.3; Lin28a (mouse) mapping to 4 D3, Lin28b (mouse) mapping to 10 B2.

SOURCE

LIN-28 (S-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of LIN-28 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-54032 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

LIN-28 (S-15) is recommended for detection of LIN-28 and LIN-28B of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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), immunohistochemistry (including paraffin-embedded sections) (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-28 (S-15) is also recommended for detection of LIN-28 and LIN-28B in additional species, including equine, canine, bovine, porcine and avian.

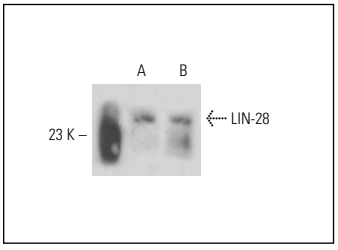
Molecular Weight of LIN-28: 28 kDa.

Positive Controls: F9 cell lysate: sc-2245, mouse embryo extract: sc-364239 or HeLa whole cell lysate: sc-2200.

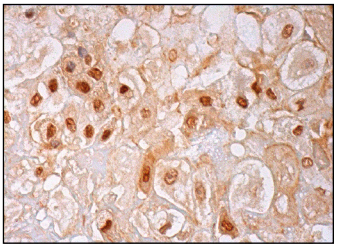
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



LIN-28 (S-15): sc-54032. Western blot analysis of LIN-28 expression in F9 whole cell lysate (**A**) and mouse embryo tissue extract (**B**).



LIN-28 (S-15): sc-54032. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear and cytoplasmic staining of decidual cells.

RESEARCH USE

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