SANTA CRUZ BIOTECHNOLOGY, INC.

RLIM siRNA (h): sc-62952

BACKGROUND

RLIM (RING finger LIM domain-binding protein), also known as RNF12 (RING finger protein 12) or NY-REN-43, is a 624 amino acid RING-H2 zinc finger protein that is involved in protein ubiquitinylation and subsequent degradation. Expressed in a variety of tissues, RLIM binds to the LIM domain of various proteins and functions as a protein ligase that negatively co-regulates LIM homeodomain (LIM-HD) transcription factors. Through its interaction with Sin3A, a component of the histone deacetylase corepressor complex, RLIM is able to recruit the corepressor complex to LIM-HD proteins, thereby inhibiting LIM-HD transcription. In addition to recruiting the deacetylase complex to LIM-HD proteins, RLIM is able to bind to, ubiquinate and subsequently degrade CLIM proteins, which function as positive co-regulators of LIM-HD transcription factors. RLIM contains one RING-type zinc finger and is implicated in renal cell carcinoma.

REFERENCES

1. Furuyama, T., et al. 1996. Localization of mRNAs for Rlim-1, the rat Xlim-1 homolog, in the developing rat brain. Brain Res. Mol. Brain Res. 36: 152-156.
2. Bach, I., et al. 1999. RLIM inhibits functional activity of LIM homeodomain transcription factors via recruitment of the histone deacetylase complex. Nat. Genet. 22: 394-399.
3. Ostendorff, H.P., et al. 2000. Functional characterization of the gene encoding RLIM, the corepressor of LIM homeodomain factors. Genomics 69: 120-130.
4. Hiratani, I., et al. 2003. Selective degradation of excess Ldb1 by RNF12/RLIM confers proper Ldb1 expression levels and Xlim-1/Ldb1 stoichiometry in *Xenopus* organizer functions. Development 130: 4161-4175.
5. Ostendorff, H.P., et al. 2006. Dynamic expression of LIM cofactors in the developing mouse neural tube. Dev. Dyn. 235: 786-791.
6. Online Mendelian Inheritance in Man, OMIM™. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 300379. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: RLIM (human) mapping to Xq13.2.

PRODUCT

RLIM siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs 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 RLIM shRNA Plasmid (h): sc-62952-SH and RLIM shRNA (h) Lentiviral Particles: sc-62952-V as alternate gene silencing products.

For independent verification of RLIM (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62952A, sc-62952B and sc-62952C.

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

RLIM siRNA (h) is recommended for the inhibition of RLIM expression in human 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

RLIM (SK-46): sc-101117 is recommended as a control antibody for monitoring of RLIM 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 RLIM gene expression knockdown using RT-PCR Primer: RLIM (h)-PR: sc-62952-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

RESEARCH USE

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

PROTOCOLS

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