SANTA CRUZ BIOTECHNOLOGY, INC.

Limd1 siRNA (m): sc-62562

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The Power to Question

BACKGROUND

The Zyxin family of proteins contains five members: Ajuba, Limd1, LPP, TRIP6 and Zyxin. Limd1 (LIM domain-containing protein 1) is a ubiquitously expressed tumor suppressor containing 3 LIM zinc-binding domains. LIM domains consist of a cysteine-rich consensus sequence containing two distinct zinc-binding subdomains, which mediate protein-protein interactions. Limd1 interacts with the proteins SQSTM1, Rb, p62 and TRAF6. Limd1 was first identified when the deletion of its gene was noted in some cervical cancers. Limd1 blocks *in vitro* and *in vivo* tumor growth and is downregulated in lung cancer. Limd1 may regulate osteoclast development under stressful conditions via its interactions with TRAF6 and p62.

REFERENCES

1. Kiss, H., et al. 2000. A novel gene containing LIM domains (Limd1) is located within the common eliminated region 1 (C3CER1) in 3p21.3. Hum. Genet. 105: 552-559.
2. Kholodnyuk, I.D., et al. 2001. Inactivation of the human fragile histidine triad gene at 3p14.2 in monochromosomal human/mouse microcell hybrid-derived severe combined immunodeficient mouse tumors. Cancer Res. 60: 7119-7125.
3. Kiss, H., et al. 2001. The LZTFL1 gene is a part of a transcriptional map covering 250 kb within the common eliminated region 1 (C3CER1) in 3p21.3. Genomics 73: 10-19.
4. Sharp, T.V., et al. 2004. LIM domains-containing protein 1 (Limd1), a tumor suppressor encoded at chromosome 3p21.3, binds Rb and represses E2F-driven transcription. Proc. Natl. Acad. Sci. USA 101: 16531-16536.
5. Petit, M.M., et al. 2005. The tumor suppressor Scrib selectively interacts with specific members of the Zyxin family of proteins. FEBS Lett. 579: 5061-5068.
6. Petit, M.M., et al. 2005. The tumor suppressor Scrib interacts with the Zyxin-related protein LPP, which shuttles between cell adhesion sites and the nucleus. BMC Cell Biol. 6: 1.

CHROMOSOMAL LOCATION

Genetic locus: Limd1 (mouse) mapping to 9 F4.

PRODUCT

Limd1 siRNA (m) 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 Limd1 shRNA Plasmid (m): sc-62562-SH and Limd1 shRNA (m) Lentiviral Particles: sc-62562-V as alternate gene silencing products.

For independent verification of Limd1 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-62562A, sc-62562B and sc-62562C.

RESEARCH USE

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

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

Limd1 siRNA (m) is recommended for the inhibition of Limd1 expression in mouse 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

Limd1 (H-4): sc-271448 is recommended as a control antibody for monitoring of Limd1 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 Limd1 gene expression knockdown using RT-PCR Primer: Limd1 (m)-PR: sc-62562-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

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