SANTA CRUZ BIOTECHNOLOGY, INC.

Sel-1L siRNA (h): sc-61514

BACKGROUND

Sel-1L resides mainly in the cytoplasm but also in the nuclei of normal pancreas cells. It has antiproliferative properties with the ability to hinder tumor cell growth in human breast, pancreas, esophageal, and prostate cancers. Sel-1L does this by remodeling the extracellular matrix which creates a microenvironment that is unfavorable to invasive growth. It may also play a role in TGF-β signaling. Approximately two thirds of breast tumors exhibit drastic downregulation or absence of Sel-1L expression, which causes the cell-matrix interactions and collagen binding to be disrupted. It has been hypothesized that Sel-1L may mediate cellular changes that promote the transition from a normal mucosa to a neoplastic lesion, suggesting that Sel-1L may be useful identifying patients who have a high risk of developing cancer.

REFERENCES

1. Orlandi, R., et al. 2002. Sel-1L expression decreases breast tumor cell aggressiveness *in vivo* and *in vitro*. Cancer Res. 62: 567-574.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 602329. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Cattaneo, M., et al. 2004. Identification of a region within Sel-1L protein required for tumour growth inhibition. Gene 326: 149-156.
4. Granelli, P., et al. 2004. Sel-1L and squamous cell carcinoma of the esophagus. Clin. Cancer Res. 10: 5857-5861.
5. Diaferia, G., et al. 2004. RNA-mediated interference indicates that Sel-1L plays a role in pancreatic β cell growth. DNA Cell Biol. 23: 510-518.

CHROMOSOMAL LOCATION

Genetic locus: SEL1L (human) mapping to 14q31.1.

PRODUCT

Sel-1L 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 Sel-1L shRNA Plasmid (h): sc-61514-SH and Sel-1L shRNA (h) Lentiviral Particles: sc-61514-V as alternate gene silencing products.

For independent verification of Sel-1L (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-61514A, sc-61514B and sc-61514C.

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

Sel-1L siRNA (h) is recommended for the inhibition of Sel-1L 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

Sel-1L (F-3): sc-377350 is recommended as a control antibody for monitoring of Sel-1L 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 Sel-1L gene expression knockdown using RT-PCR Primer: Sel-1L (h)-PR: sc-61514-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Chiritoiu, M., et al. 2020. EDEM1 drives misfolded protein degradation via ERAD and exploits ER-phagy as back-up mechanism when ERAD is impaired. Int. J. Mol. Sci. 21: E3468.

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.