SANTA CRUZ BIOTECHNOLOGY, INC.

SEDL siRNA (m): sc-62985

BACKGROUND

SEDL (sedlin), also known as TRAPPC2 (trafficking protein particle complex subunit 2), SEDT, TRS20, MIP-2A (MBP-1-interacting protein 2A) or ZNF547L, is an evolutionarily conserved member of the sedlin subfamily of the TRAPP small subunits family of proteins. Localizing to the perinuclear region of the cytoplasm, SEDL binds to α Enolase and, by sequestering it in the cytoplasm, inhibits α Enolase transcriptional repression and α Enolase-mediated cell death. In addition, SEDL is believed to be involved in transport from the endoplasmic reticulum (ER) to the Golgi, functioning as a component of the multisubunit transport protein particle (TRAPP) complex. Mutations in the gene encoding SEDL can result in the late childhood onset of spondyloepiphyseal dysplasia tarda (SEDT), an X-linked recessive disease of endochondral bone formation affecting men. SEDT patients exhibit a short trunk and hips with degenerative disease.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300202. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
2. Gécz, J., et al. 2003. Human wild-type SEDL protein functionally complements yeast Trs20p but some naturally occurring SEDL mutants do not. Gene 320: 137-144.
3. Shaw, M.A., et al. 2003. Identification of three novel SEDL mutations, including mutation in the rare, non-canonical splice site of exon 4. Clin. Genet. 64: 235-242.
4. Savarirayan, R., et al. 2003. Spondyloepiphyseal dysplasia tarda (SEDL, MIM #313400). Eur. J. Hum. Genet. 11: 639-642.
5. Fan, L., et al. 2003. Interaction of sedlin with chloride intracellular channel proteins. FEBS Lett. 540: 77-80.
6. Wang, H.L., et al. 2003. Gene diagnosis of X-linked spondyloepiphyseal dysplasia tarda by linkage analysis and DNA sequencing. Zhonghua Er Ke Za Zhi 41: 256-259.

CHROMOSOMAL LOCATION

Genetic locus: Trappc2 (mouse) mapping to X F5.

PRODUCT

SEDL 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 SEDL shRNA Plasmid (m): sc-62985-SH and SEDL shRNA (m) Lentiviral Particles: sc-62985-V as alternate gene silencing products.

For independent verification of SEDL (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-62985A, sc-62985B and sc-62985C.

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

SEDL siRNA (m) is recommended for the inhibition of SEDL 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

SEDL (JK-4): sc-101312 is recommended as a control antibody for monitoring of SEDL 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 SEDL gene expression knockdown using RT-PCR Primer: SEDL (m)-PR: sc-62985-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.