SANTA CRUZ BIOTECHNOLOGY, INC.

# PRELI siRNA (m): sc-76243

## BACKGROUND

PRELI (protein of relevant evolutionary and lymphoid interest), also known as PRELID1, is a 219 amino acid mitochondrial protein that is encoded within a conserved IκB-α and Rab 24 gene cluster. PRELI is highly expressed in fetal liver, which is a major site for B cell lymphopoiesis. During maturation, expression levels of PRELI are drastically reduced in liver and predominant expression is found in brain, lymph nodes, peripheral blood leukocytes and spleen. Changes in expression pattern suggest that PRELI is vital for the development of immunocompetent organs. PRELI contains a late embryogenesis abundant (LEA) motif which is commonly found in plant proteins, suggesting a phylogenetic link between plants and animals. PRELI also contains a 170 amino acid PRELI/MSF1 domain at its N-terminus which may have a function associated with the cellular membrane.

## REFERENCES


1. Niu, S., et al. 1996. Cloning and sequencing of a developmentally regulated avian mRNA containing the LEA motif found in plant seed proteins. Gene 175: 187-191.
2. Guzman-Rojas, L., et al. 2000. PRELI, the human homologue of the avian px19, is expressed by germinal center B lymphocytes. Int. Immunol. 12: 607-612.
3. Jones, J.B., et al. 2001. Detection of mitochondrial DNA mutations in pancreatic cancer offers a "mass"-ive advantage over detection of nuclear DNA mutations. Cancer Res. 61: 1299-1304.
4. Fox, E.J., et al. 2004. PRELI (protein of relevant evolutionary and lymphoid interest) is located within an evolutionarily conserved gene cluster on chromosome 5q34-q35 and encodes a novel mitochondrial protein. Biochem. J. 378: 817-825.
5. Dee, C.T. and Moffat, K.G. 2005. A novel family of mitochondrial proteins is represented by the *Drosophila* genes SLMO, PRELI-like and real-time. Dev. Genes Evol. 215: 248-254.
6. Knights, A.J., et al. 2006. A novel MHC-associated proteinase 3 peptide isolated from primary chronic myeloid leukaemia cells further supports the significance of this antigen for the immunotherapy of myeloid leukaemias. Leukemia 20: 1067-1072.


## CHROMOSOMAL LOCATION

Genetic locus: Prelid1 (mouse) mapping to 13 B1.

## PRODUCT

PRELI 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 PRELI shRNA Plasmid (m): sc-76243-SH and PRELI shRNA (m) Lentiviral Particles: sc-76243-V as alternate gene silencing products.

For independent verification of PRELI (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-76243A, sc-76243B and sc-76243C.

## 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

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

PRELI (H-7): sc-390191 is recommended as a control antibody for monitoring of PRELI 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 PRELI gene expression knockdown using RT-PCR Primer: PRELI (m)-PR: sc-76243-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.