SANTA CRUZ BIOTECHNOLOGY, INC.

PROCA1 siRNA (m): sc-140274

BACKGROUND

PROCA1 (protein interacting with cyclin A1), also known as proline-rich cyclin A1-interacting protein, is a 364 amino acid protein that belongs to the PROCA1 family and exists as two alternatively spliced isoforms. Conserved in dog, cow, mouse and rat, PROCA1 participates in calcium ion binding and phospholipase A2 activity. The gene that encodes PROCA1 maps to human chromosome 17q11.2. Chromosome 17 makes up over 2.5% of the human genome, with approximately 81 million bases encoding over 1,200 genes. Two key tumor suppressor genes are associated with chromosome 17, namely, p53 and BRCA1. Malfunction or loss of p53 expression is associated with malignant cell growth and Li-Fraumeni syndrome. BRCA1 is recognized as a genetic determinant of early onset breast cancer. Chromosome 17 is also linked to neurofibromatosis, dysregulated Schwann cell growth, Alexander disease, Birt-Hogg-Dube syndrome and Canavan disease.

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CHROMOSOMAL LOCATION

Genetic locus: Proca1 (mouse) mapping to 11 B5.

RESEARCH USE

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

PRODUCT

PROCA1 siRNA (m) is a pool of 2 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 PROCA1 shRNA Plasmid (m): sc-140274-SH and PROCA1 shRNA (m) Lentiviral Particles: sc-140274-V as alternate gene silencing products.

For independent verification of PROCA1 (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-140274A and sc-140274B.

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

PROCA1 siRNA (m) is recommended for the inhibition of PROCA1 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor PROCA1 gene expression knockdown using RT-PCR Primer: PROCA1 (m)-PR: sc-140274-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.