SANTA CRUZ BIOTECHNOLOGY, INC.

collectrin siRNA (m): sc-142481

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Collectrin, also known as TMEM27 (transmembrane protein 27) or NX17, is a 222 amino acid single-pass type I membrane protein belonging to the TMEM27 family. Collectrin interacts with Snapin to regulate SNARE complex function, which in turn controls Insulin exocytosis. Collectrin has been found to stimulate β cell replication and plays a role in renal amino acid uptake. Localizing to luminal surface and cytoplasm of renal collecting ducts of the cortex and medulla, collectrin is also found in β cells of pancreatic islets, where its extracellular domain becomes cleaved following translation and is released from the cell membrane. Collectrin exists as a homodimer, undergoes post-translational glycosylation and interacts with XTRP2. The gene encoding collectrin maps to human chromosome Xp22.2.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Tmem27 (mouse) mapping to X F5.

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.

PRODUCT

collectrin 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 collectrin shRNA Plasmid (m): sc-142481-SH and collectrin shRNA (m) Lentiviral Particles: sc-142481-V as alternate gene silencing products.

For independent verification of collectrin (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-142481A, sc-142481B and sc-142481C.

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

collectrin siRNA (m) is recommended for the inhibition of collectrin 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 collectrin gene expression knockdown using RT-PCR Primer: collectrin (m)-PR: sc-142481-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.