



calicin siRNA (m): sc-141980

BACKGROUND

Calicin (CCIN) is a 588 amino acid testis specific protein of the sperm head cytoskeleton. Found in the sperm head perinuclear theca, calicin localizes to the postacrosomal calyx and colocalizes with actin in the acrosomal region of round spermatids. Calicin's ability to form tetramers and higher polymers contributes to the rigid structure of the calyx. Calicin may function as a morphogenetic cytoskeletal element during spermiogenic differentiation, and the absence or deformation of calicin may contribute to sperm malformations such as teratozoospermia. Containing one BACK (BTB/Kelch associated) domain, a BTB (POZ) domain and six Kelch repeats, calicin is encoded by a gene located on human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9.

REFERENCES

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3. Lécuyer, C., et al. 2000. Actin-binding properties and colocalization with actin during spermiogenesis of mammalian sperm calicin. *Biol. Reprod.* 63: 1801-1810.
4. Burmeister, T., et al. 2007. Atypical BCR-ABL mRNA transcripts in adult acute lymphoblastic leukemia. *Haematologica* 92: 1699-1702.
5. Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (rendu-osler disease). *Respiration* 74: 361-378.
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CHROMOSOMAL LOCATION

Genetic locus: Ccin (mouse) mapping to 4 B1.

PRODUCT

calicin 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see calicin shRNA Plasmid (m): sc-141980-SH and calicin shRNA (m) Lentiviral Particles: sc-141980-V as alternate gene silencing products.

For independent verification of calicin (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-141980A, sc-141980B and sc-141980C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

calicin siRNA (m) is recommended for the inhibition of calicin 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 μ M in 66 μ l. 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 calicin gene expression knockdown using RT-PCR Primer: calicin (m)-PR: sc-141980-PR (20 μ l). 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.