SANTA CRUZ BIOTECHNOLOGY, INC.

Mitsugumin23 siRNA (h): sc-96448

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The Power to Question

BACKGROUND

With approximately 135 million base pairs and 1,400 genes, chromosome 11 makes up around 4% of human genomic DNA and is considered a gene and disease association dense chromosome. Defects in chromosome 11 have been linked to many diseases, including Wilms' tumors, WAGR syndrome, and Denys-Drash syndrome, Sickle cell anemia and β thalassemia. On chromosome 11q12.2 is a gene encoding Mitsugumin23. Mitsugumin23 (Mg23), also known as transmembrane protein 109 (TMEM109), is a 243 amino acid multipass transmembrane protein localized to the membrane of the nucleus, endoplasmic reticulum and sarcoplasmic reticulum. It is comprised of two primary domains: a 33 amino acid signal peptide and a 109 amino acid chain consisting of four transmembrane domains.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TMEM109 (human) mapping to 11q12.2.

PRODUCT

Mitsugumin23 siRNA (h) 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 Mitsugumin23 shRNA Plasmid (h): sc-96448-SH and Mitsugumin23 shRNA (h) Lentiviral Particles: sc-96448-V as alternate gene silencing products.

For independent verification of Mitsugumin23 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-96448A and sc-96448B.

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

Mitsugumin23 siRNA (h) is recommended for the inhibition of Mitsugumin23 expression in human 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 Mitsugumin23 gene expression knockdown using RT-PCR Primer: Mitsugumin23 (h)-PR: sc-96448-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.