SANTA CRUZ BIOTECHNOLOGY, INC.

BC055107 siRNA (m): sc-141627

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The Power to Question

BACKGROUND

The chromosomal band of 3p21 is frequently deleted in several types of tumors, suggesting that this region may harbor multiple tumor suppressor genes. The DRR1 (down-regulated in renal cell carcinoma 1) gene, also known as FAM107A and Protein TU3A, is located in this critical chromosomal region and encodes a 144 amino acid nuclear protein that contains a coiled region, suggesting that the protein may function to regulate gene transcription and signal transduction. With the exception of peripheral blood cells, DRR1 is expressed in all normal tissues, but shows significant loss of expression in renal cell carcinomas and frequent loss of expression in cervical, gastric, ovarian and nonsmall cell lung cancers. Transfection of DRR1 mRNA into cancer cell lines inhibits cell growth and proliferation, supporting the evidence that the gene functions as an important tumor suppressor. There are two isoforms of DRR1 that exist as a result of alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Fam107a (mouse) mapping to 14 A1.

PRODUCT

BC055107 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 BC055107 shRNA Plasmid (m): sc-141627-SH and BC055107 shRNA (m) Lentiviral Particles: sc-141627-V as alternate gene silencing products.

For independent verification of BC055107 (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-141627A, sc-141627B and sc-141627C.

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

BC055107 siRNA (m) is recommended for the inhibition of BC055107 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 BC055107 gene expression knockdown using RT-PCR Primer: BC055107 (m)-PR: sc-141627-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.