SANTA CRUZ BIOTECHNOLOGY, INC.

SERAC1 siRNA (h): sc-95412

BACKGROUND

SERAC1 (serine active site containing 1) is a 654 amino acid single-pass membrane protein that belongs to the SERAC1 family. Mutations in Serac1 or Synj2 cause male mouse sterility. SYNJ2 (synaptojanin 2), GTF2H5 (general transcription factor iih, polypeptide 5) and TULP4 (Tubby-like protein 4) are all neighbors of the SERAC1 gene. Existing as three alternatively spliced isoforms, the SERAC1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and rice, and maps to human chromosome 6q25.3. Terminal deletions of 6q, beginning at 6q25 and spanning a 0.3 Mb region, may impair normal development of caudal structures, possibly acting on notochordal development. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus. A bipolar disorder susceptibility locus has also been identified on the q arm of chromosome 6.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: SERAC1 (human) mapping to 6q25.3.

RESEARCH USE

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

PRODUCT

SERAC1 siRNA (h) 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 SERAC1 shRNA Plasmid (h): sc-95412-SH and SERAC1 shRNA (h) Lentiviral Particles: sc-95412-V as alternate gene silencing products.

For independent verification of SERAC1 (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-95412A, sc-95412B and sc-95412C.

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

SERAC1 siRNA (h) is recommended for the inhibition of SERAC1 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 SERAC1 gene expression knockdown using RT-PCR Primer: SERAC1 (h)-PR: sc-95412-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.