SANTA CRUZ BIOTECHNOLOGY, INC.

SDR16C6 siRNA (h): sc-77533

BACKGROUND

SDR16C6 (short chain dehydrogenase/reductase family 16C, member 6, pseudogene) is a 316 amino acid protein that belongs to the short-chain dehydrogenases/reductases (SDR) family. The SDR superfamily now has over 47,000 members, most of which are distantly related, with typically 20-30% residue identity in pairwise comparisons, making it difficult to obtain an overview of this superfamily. The SDR enzymes are present in virtually all genomes investigated, and in humans over 70 SDR genes have been identified. The SDR16C6 gene maps to human chromosome 8q12.1 or mouse chromosome 4 A1. Made up of nearly 146 million bases, human chromosome 8 encodes about 800 genes. Translocation of portions of chromosome 8 with amplifications of the c-Myc gene are found in some leukemias and lymphomas, and typically associated with a poor prognosis. Portions of chromosome 8 have been linked to schizophrenia and bipolar disorder.

REFERENCES

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3. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). Genome Res. 14: 2121-2127.
4. Nusbaum, C., et al. 2006. DNA sequence and analysis of human chromosome 8. Nature 439: 331-335.
5. Persson, B., et al. 2009. The SDR (short-chain dehydrogenase/reductase and related enzymes) nomenclature initiative. Chem. Biol. Interact. 178: 94-98.
6. Church, D.M., et al. 2009. Lineage-specific biology revealed by a finished genome assembly of the mouse. PLoS Biol. 7: e1000112.
7. Kallberg, Y., et al. 2010. Classification of the short-chain dehydrogenase/reductase superfamily using hidden Markov models. FEBS J. 277: 2375-2386.

CHROMOSOMAL LOCATION

Genetic locus: SDR16C6P (human) mapping to 8q12.1.

PRODUCT

SDR16C6 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 SDR16C6 shRNA Plasmid (h): sc-77533-SH and SDR16C6 shRNA (h) Lentiviral Particles: sc-77533-V as alternate gene silencing products.

For independent verification of SDR16C6 (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-77533A, sc-77533B and sc-77533C.

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

SDR16C6 siRNA (h) is recommended for the inhibition of SDR16C6 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 SDR16C6 gene expression knockdown using RT-PCR Primer: SDR16C6 (h)-PR: sc-77533-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.