SANTA CRUZ BIOTECHNOLOGY, INC.

OKL38 siRNA (h): sc-75992

BACKGROUND

OKL38 (ovary, kidney and liver protein 38), also known as OSGIN1 (oxidative stress-induced growth inhibitor 1) or BDGI, is a 560 amino acid protein that is expressed ubiquitously, with highest levels in kidney, liver and ovary tissue. Existing as three alternatively spliced isoforms, OKL38 functions to regulate the differentiation and proliferation of cells, specifically by regulating apoptosis and cell death. Loss of OKL38 activity leads to a disruption in the balance between cell growth, cell proliferation and cell death, and is associated with rapid tumor growth and metastasis. The gene encoding OKL38 maps to human chromosome 16, which houses over 900 genes and comprises nearly 3% of the human genome.

REFERENCES

1. Huynh, H., et al. 2001. Cloning and characterization of a novel pregnancy-induced growth inhibitor in mammary gland. Endocrinology 142: 3607-3615.
2. Riou, P., et al. 2002. Investigation in liver tissues and cell lines of the transcription of 13 genes mapping to the 16q24 region that are frequently deleted in hepatocellular carcinoma. Clin. Cancer Res. 8: 3178-3186.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607975. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Ong, C.K., et al. 2004. Structural characterization of three novel rat OKL38 transcripts, their tissue distributions, and their regulation by human chorionic Gonadotropin. Endocrinology 145: 4763-4774.
5. Ong, C.K., et al. 2004. Genomic structure of human OKL38 gene and its differential expression in kidney carcinogenesis. J. Biol. Chem. 279: 743-754.
6. Wang, T., et al. 2005. Bone marrow stromal cell-derived growth inhibitor inhibits growth and migration of breast cancer cells via induction of cell cycle arrest and apoptosis. J. Biol. Chem. 280: 4374-4382.

CHROMOSOMAL LOCATION

Genetic locus: OSGIN1 (human) mapping to 16q23.3.

PRODUCT

OKL38 siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see OKL38 shRNA Plasmid (h): sc-75992-SH and OKL38 shRNA (h) Lentiviral Particles: sc-75992-V as alternate gene silencing products.

For independent verification of OKL38 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3 nmol of lyophilized siRNA. These include: sc-75992A, sc-75992B and sc-75992C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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

OKL38 siRNA (h) is recommended for the inhibition of OKL38 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 OKL38 gene expression knockdown using RT-PCR Primer: OKL38 (h)-PR: sc-75992-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.