SANTA CRUZ BIOTECHNOLOGY, INC.

OGFOD1 siRNA (h): sc-93157

BACKGROUND

OGFOD1 (2-oxoglutarate and iron-dependent oxygenase domain containing 1), also known as TPA1 (termination and polyadenylation 1), is a 542 amino acid protein that contains one PKHD (prolyl/lysyl hydroxylase) domain and is able to bind both ascorbate and iron as cofactors. Multiple isoforms of OGFOD1 exist due to alternative splicing events. The gene encoding OGFOD1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

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3. Forabosco, P., et al. 2006. Meta-analysis of genome-wide linkage studies of systemic lupus erythematosus. Genes Immun. 7: 609-614.
4. Carneiro, L.A., et al. 2007. NOD-like receptors in innate immunity and inflammatory diseases. Ann. Med. 39: 581-593.
5. Gervasini, C., et al. 2007. High frequency of mosaic CREBBP deletions in Rubinstein-Taybi syndrome patients and mapping of somatic and germline breakpoints. Genomics 90: 567-573.
6. King, K., et al. 2007. Identification, evolution, and association study of a novel promoter and first exon of the human NOD2 (CARD 15) gene. Genomics 90: 493-501.
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CHROMOSOMAL LOCATION

Genetic locus: OGFOD1 (human) mapping to 16q12.2.

PRODUCT

OGFOD1 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 OGFOD1 shRNA Plasmid (h): sc-93157-SH and OGFOD1 shRNA (h) Lentiviral Particles: sc-93157-V as alternate gene silencing products.

For independent verification of OGFOD1 (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-93157A, sc-93157B and sc-93157C.

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

OGFOD1 siRNA (h) is recommended for the inhibition of OGFOD1 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 OGFOD1 gene expression knockdown using RT-PCR Primer: OGFOD1 (h)-PR: sc-93157-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.