SANTA CRUZ BIOTECHNOLOGY, INC.

APCDD1 siRNA (m): sc-141147

BACKGROUND

APCDD1 (adenomatosis polyposis coli down-regulated 1), also known as B7323, DRAPC1 or FP7019, is a 514 amino acid single-pass type I membrane protein whose transcription is regulated by the β-catenin/ITF-2 complex. Expressed in high levels in ovary, heart, pancreas and prostate, with lower levels in spleen, lung, kidney, liver and colon, APCDD1 is thought to function as a developmental target of the β-catenin pathway and may play an important role in colorectal tumorigenesis. The gene encoding human APCDD1 maps to chromosome 18p11.22, which houses over 300 protein-coding genes and contains nearly 76 million bases. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include Trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

REFERENCES

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2. Takahashi, M., et al. 2002. Isolation of a novel human gene, APCDD1, as a direct target of the β-catenin/T-cell factor 4 complex with probable involvement in colorectal carcinogenesis. Cancer Res. 62: 5651-5656.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607479. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Petek, E., et al. 2003. Characterisation of a 19-year-old "long-term survivor" with Edwards syndrome. Genet. Couns. 14: 239-244.
5. Raghavan, S.C., et al. 2004. A non-B-DNA structure at the Bcl-2 major breakpoint region is cleaved by the RAG complex. Nature 428: 88-93.
6. Grosso, S., et al. 2005. Chromosome 18 aberrations and epilepsy: a review. Am. J. Med. Genet. A 134A: 88-94.
7. Aurizi, C., et al. 2007. Heterogeneity of mutations in the ferrochelatase gene in Italian patients with erythropoietic protoporphyria. Mol. Genet. Metab. 90: 402-407.

CHROMOSOMAL LOCATION

Genetic locus: Apcdd1 (mouse) mapping to 18 E1.

PRODUCT

APCDD1 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 APCDD1 shRNA Plasmid (m): sc-141147-SH and APCDD1 shRNA (m) Lentiviral Particles: sc-141147-V as alternate gene silencing products.

For independent verification of APCDD1 (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-141147A, sc-141147B and sc-141147C.

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

APCDD1 siRNA (m) is recommended for the inhibition of APCDD1 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 APCDD1 gene expression knockdown using RT-PCR Primer: APCDD1 (m)-PR: sc-141147-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Yiew, N.K.H., et al. 2017. A novel role for the Wnt inhibitor APCDD1 in adipocyte differentiation: implications for diet-induced obesity. J. Biol. Chem. 292: 6312-6324.

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.