SANTA CRUZ BIOTECHNOLOGY, INC.

PCBD2 siRNA (h): sc-91865

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The Power to Question

BACKGROUND

PCBD2 (pterin-4 α-carbinolamine dehydratase/dimerization cofactor of hepatocyte nuclear factor 1 α (TCF1) 2), also known as PHS2, 4-α-hydroxy-tetrahydropterin dehydratase 2, HNF-1α dimerization cofactor, DCOH2 or DCOHM, is a 130 amino acid protein that plays a role in tetrahydrobiopterin biosynthesis. PCBD2 exists as a homotetramer that interacts with Dyrk1B and assists in the dimerization of HNF-1α (hepatocyte nuclear factor 1-α) while improving its transcriptional activity. A member of the pterin-4-α-carbinolamine dehydratase family, PCBD2 prevents the formation of 7-pterins and is encoded by a gene that maps to human chromosome 5q31.1 and mouse chromosome 13 B1.

REFERENCES

1. Lim, S., et al. 2002. Mirk protein kinase is activated by MKK3 and functions as a transcriptional activator of HNF1α. J. Biol. Chem. 277: 25040-25046.
2. Arias, J.M., et al. 2003. Cloning of a novel one-repeat calcium channel-like gene. Biochem. Biophys. Res. Commun. 303: 31-36.
3. Rose, R.B., et al. 2004. Biochemical and structural basis for partially redundant enzymatic and transcriptional functions of DCoH and DCoH2. Biochemistry 43: 7345-7355.
4. Schaaf, C.P., et al. 2005. Novel interaction partners of the TPR/MET tyrosine kinase. FASEB J. 19: 267-269.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 609836. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
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CHROMOSOMAL LOCATION

Genetic locus: PCBD2 (human) mapping to 5q31.1.

PRODUCT

PCBD2 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 PCBD2 shRNA Plasmid (h): sc-91865-SH and PCBD2 shRNA (h) Lentiviral Particles: sc-91865-V as alternate gene silencing products.

For independent verification of PCBD2 (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-91865A, sc-91865B and sc-91865C.

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.

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

PCBD2 siRNA (h) is recommended for the inhibition of PCBD2 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 PCBD2 gene expression knockdown using RT-PCR Primer: PCBD2 (h)-PR: sc-91865-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.