SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

P5CR siRNA (m): sc-151970

BACKGROUND

P5CR (pyrroline-5-carboxylate reductase), also known as PYCR1, is a 319 amino acid mitochondrial protein that belongs to the pyrroline-5-carboxylate reductase family. Existing as a homodecamer, P5CR is composed of five homodimers. Acting as a housekeeping enzyme that catalyzes the last step in proline biosynthesis, P5CR is involved in the cellular response to oxidative stress. Upon oxidative stress, P5CR interacts with both NAD and NADP. Defects in P5CR are the cause of cutis laxa autosomal recessive type 2B (ARCL2B), a multisystem disorder characterized by the appearance of premature aging, wrinkled and lax skin with reduced elasticity, joint laxity, craniofacial dysmorphic features, intrauterine growth retardation and some degree of postnatal growth deficiency. The gene that encodes P5CR consists of nearly 5,000 bases and maps to human chromosome 17q25.3.

REFERENCES

1. Yeh, G.C., et al. 1981. Pyrroline-5-carboxylate reductase in human erythrocytes. J. Clin. Invest. 67: 1042-1046.
2. Merrill, M.J., et al. 1989. Purified human erythrocyte pyrroline-5-carboxylate reductase. Preferential oxidation of NADPH. J. Biol. Chem. 264: 9352-9358.
3. Dougherty, K.M., et al. 1992. Cloning human pyrroline-5-carboxylate reductase cDNA by complementation in *Saccharomyces cerevisiae*. J. Biol. Chem. 267: 871-875.
4. Online Mendelian Inheritance in Man, OMIM™. 1993. Johns Hopkins University, Baltimore, MD. MIM Number: 179035. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
5. Basch, J.J., et al. 1996. Pyrroline-5-carboxylate reductase in lactating bovine mammary glands. J. Dairy Sci. 79: 1361-1368.
6. Meng, Z., et al. 2006. Crystal structure of human pyrroline-5-carboxylate reductase. J. Mol. Biol. 359: 1364-1377.
7. Guernsey, D.L., et al. 2009. Mutation in pyrroline-5-carboxylate reductase 1 gene in families with cutis laxa type 2. Am. J. Hum. Genet. 85: 120-129.
8. Reversade, B., et al. 2009. Mutations in PYCR1 cause cutis laxa with progeroid features. Nat. Genet. 41: 1016-1021.

CHROMOSOMAL LOCATION

Genetic locus: Pycr1 (mouse) mapping to 11 E2.

PRODUCT

P5CR 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 P5CR shRNA Plasmid (m): sc-151970-SH and P5CR shRNA (m) Lentiviral Particles: sc-151970-V as alternate gene silencing products.

For independent verification of P5CR (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-151970A, sc-151970B and sc-151970C.

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

P5CR siRNA (m) is recommended for the inhibition of P5CR 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 P5CR gene expression knockdown using RT-PCR Primer: P5CR (m)-PR: sc-151970-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.