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.

Cyp21a1 siRNA (m): sc-142664

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The cytochrome P450 proteins are monooxygenases that catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. P450 enzymes are classified into subfamilies based on their sequence similarities. CYP21A2 localizes to the endoplasmic reticulum and hydroxylates steroids at the 21 position. Activity of CYP21A2 is required for the synthesis of steroid hormones, including cortisol and aldosterone. Mutations in this gene is the primary cause of congenital adrenal hyperplasia (CAH), an autosomal recessive disorder. Gene conversion events involving the functional CYP21A2 gene (C21B) and a related pseudogene (C21A) located near the C21B gene may account for the majority of cases of steroid 21-hydroxylase deficiency.

REFERENCES

1. Peterson, J.A., Sevrioukova, I., Truan, G. and Graham-Lorence, S.E. 1997. P450BM-3; a tale of two domains—or is it three? Steroids 62: 117-123.
2. Nelson, D.R., Koymans, L., Kamataki, T., Stegeman, J.J., Feyereisen, R., Waxman, D.J., Waterman, M.R., Gotoh, O., Coon, M.J., Estabrook, R.W., Gunsalus, I.C. and Nebert, D.W. 1996. P450 superfamily: update on new sequences, gene mapping, accession numbers and nomenclature. Pharmacogenetics 6: 1-42.
3. Araujo, R.S., Billerbeck, A.E., Madureira, G., Mendonca, B.B. and Bachega, T.A. 2005. Substitutions in the CYP21A2 promoter explain the simple-virilizing form of deficiency in patients harbouring a P30L mutation. Clin. Endocrinol. 62: 132-136.
4. Grigorescu Sido, A., Weber, M.M., Grigorescu Sido, P., Clausmeyer, S., Heinrich, U. and Schulze, E. 2005. 21-Hydroxylase and 11β-hydroxylase mutations in Romanian patients with classic congenital adrenal hyperplasia. J. Clin. Endocrinol. Metab. 90: 5769-5773.
5. Keen-Kim, D., Redman, J.B., Alanes, R.U., Eachus, M.M., Wilson, R.C., New, MI., Nakamoto, J.M. and Fenwick, R.G. 2005. Validation and clinical application of a locus-specific polymerase chain reaction- and minisequencing-based assay for congenital adrenal hyperplasia (21-hydroxylase deficiency). J. Mol. Diagn. 7: 236-246.
6. Krone, N., Riepe, F.G., Grötzinger, J., Partsch, C.J., Brämswig, J. and Sippell, W.G. 2005. The residue E351 is essential for the activity of human 21-hydroxylase: evidence from a naturally occurring novel point mutation compared with artificial mutants generated by single amino acid substitutions. J. Mol. Med. 83: 561-568.
7. Riepe, F.G., Tatzel, S., Sippell, W.G., Pleiss, J. and Krone, N. 2005. Congenital adrenal hyperplasia: the molecular basis of 21-hydroxylase deficiency in H-2(aw18) mice. Endocrinology 146: 2563-2574.
8. Chang, S.F. and Chung, B.C. 1996. Difference in transcriptional activity of two homologous CYP21A genes. Mol. endocrinol. 9: 1330-1336.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Cyp21a1 (mouse) mapping to 17 B1.

PRODUCT

Cyp21a1 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 Cyp21a1 shRNA Plasmid (m): sc-142664-SH and Cyp21a1 shRNA (m) Lentiviral Particles: sc-142664-V as alternate gene silencing products.

For independent verification of Cyp21a1 (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-142664A, sc-142664B and sc-142664C.

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

Cyp21a1 siRNA (m) is recommended for the inhibition of Cyp21a1 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 Cyp21a1 gene expression knockdown using RT-PCR Primer: Cyp21a1 (m)-PR: sc-142664-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.