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.

UAP1 siRNA (m): sc-154837

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

UDP-GlcNAc (UDP-N-acetylglucosamine) is a coenzyme in metabolism that is used for making proteoglycans, glycosaminoglycans and glycolipids. UDP-GlcNAc is also involved in intracellular and nuclear signaling, nuclear pore formation and may be apart of the glucose sensing mechanism in pancreas β-cells. UAP1 (UDP-N-acetylhexosamine pyrophosphorylase), also known as Antigen X and SPAG2 (sperm-associated antigen 2), is a 522 amino acid protein that catalyzes the final step of UDP-GlcNAc biosynthesis from fructose-6-phosphate. There are three isoforms of UAP1 that are produced as a result of alternative splicing events. Though UAP1 is widely expressed, isoform 1 is more abundant in testis than isoform 2, while isoform 2 is more abundant in somatic tissue. In sperm, UAP1 localizes to the principle piece of the tail, neck region of the head and midpiece of the tail. Antibodies against UAP1 have been discovered in infertile patients sera, suggesting that this immune-complex may affect sperm function.

REFERENCES

1. Diekman, A.B. and Goldberg, E. 1994. Characterization of a human antigen with sera from infertile patients. Biol. Reprod. 50: 1087-1093.
2. Mio, T., Yabe, T., Arisawa, M. and Yamada-Okabe, H. 1998. The eukaryotic UDP-N-acetylglucosamine pyrophosphorylases. Gene cloning, protein expression, and catalytic mechanism. J. Biol. Chem. 273: 14392-14397.
3. Wang-Gillam, A., Pastuszak, I. and Elbein, A.D. 1998. A 17-amino acid insert changes UDP-N-acetylhexosamine pyrophosphorylase specificity from UDP-GalNAc to UDP-GlcNAc. J. Biol. Chem. 273: 27055-27057.
4. Mio, T., Yamada-Okabe, T., Arisawa, M. and Yamada-Okabe, H. 1999. *Saccharomyces cerevisiae* GNA1, an essential gene encoding a novel acetyltransferase involved in UDP-N-acetylglucosamine synthesis. J. Biol. Chem. 274: 424-429.
5. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 602862. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Peneff, C., Ferrari, P., Charrier, V., Taburet, Y., Monnier, C., Zamboni, V., Winter, J., Harnois, M., Fassy, F. and Bourne, Y. 2001. Crystal structures of two human pyrophosphorylase isoforms in complexes with UDPGlc(Gal)NAc: role of the alternatively spliced insert in the enzyme oligomeric assembly and active site architecture. EMBO J. 20: 6191-6202.
7. Buse, M.G. 2006. Hexosamines, Insulin resistance, and the complications of diabetes: current status. Am. J. Physiol. Endocrinol. Metab. 290: E1-E8.
8. Schwerin, M., Kuehn, C., Wimmers, S., Walz, C. and Goldammer, T. 2006. Trait-associated expressed hepatic and intestine genes in cattle of different metabolic type—putative functional candidates for nutrient utilization. J. Anim. Breed. Genet. 123: 307-314.
9. Isaji, T., Kariya, Y., Xu, Q., Fukuda, T., Taniguchi, N. and Gu, J. 2010. Functional roles of the bisecting GlcNAc in integrin-mediated cell adhesion. Meth. Enzymol. 480: 445-459.

CHROMOSOMAL LOCATION

Genetic locus: Uap1 (mouse) mapping to 1 H3.

PRODUCT

UAP1 siRNA (m) is a target-specific 19-25 nt siRNA 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 UAP1 shRNA Plasmid (m): sc-154837-SH and UAP1 shRNA (m) Lentiviral Particles: sc-154837-V as alternate gene silencing 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

UAP1 siRNA (m) is recommended for the inhibition of UAP1 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 UAP1 gene expression knockdown using RT-PCR Primer: UAP1 (m)-PR: sc-154837-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.