



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](https://www.linkedin.com/company/szaboscandic) 

CPA1 siRNA (m): sc-142537

BACKGROUND

Human pancreatic procarboxypeptidase A exists as three different active forms, two of which are designated carboxypeptidase A1 (CPA1) and carboxypeptidase A2 (CPA2). CPA1, also known as CPA, is a 419 amino acid secreted monomeric protein that is highly expressed in pancreatic tissue. Functioning as a pancreatic exopeptidase, CPA1 uses zinc as a cofactor to catalyze the release of C-terminal amino acids from a variety of proteins, thereby playing a key role in protein digestion and degradation. Via its catalytic activity, CPA1 is also thought to be involved in zymogen (proenzyme) inhibition, probably functioning to block enzyme activation pathways. Abnormal levels of CPA1 are associated with pancreatic cancer, suggesting a possible role in either tumor progression or tumor suppression events.

REFERENCES

1. Stewart, E.A., Craik, C.S., Hake, L. and Bowcock, A.M. 1990. Human carboxypeptidase A identifies a BglII RFLP and maps to 7q31-qter. *Am. J. Hum. Genet.* 46: 795-800.
2. Moulard, M., Michon, T., Kerfelec, B. and Chapus, C. 1990. Further studies on the human pancreatic binary complexes involving procarboxypeptidase A. *FEBS Lett.* 261: 179-183.
3. Laethem, R.M., Blumenkopf, T.A., Cory, M., Elwell, L., Moxham, C.P., Ray, P.H., Walton, L.M. and Smith, G.K. 1996. Expression and characterization of human pancreatic procarboxypeptidase A1 and procarboxypeptidase A2. *Arch. Biochem. Biophys.* 332: 8-18.
4. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 114850. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Shamamian, P., Goldberg, J.D., Ye, X.Y., Stewart, J.D., White, P.J. and Gilvarg, C. 2006. Evaluation of pro-carboxypeptidase A and carboxypeptidase A as serologic markers for adenocarcinoma of the pancreas. *HPB* 8: 451-457.
6. Zhou, Q., Law, A.C., Rajagopal, J., Anderson, W.J., Gray, P.A. and Melton, D.A. 2007. A multipotent progenitor domain guides pancreatic organogenesis. *Dev. Cell* 13: 103-114.
7. 2008. Role of carboxypeptidases in carcinogenesis. *Biomed. Khim.* 54: 167-178.
8. Garabelli, P.J., Modrall, J.G., Penninger, J.M., Ferrario, C.M. and Chappell, M.C. 2008. Distinct roles for angiotensin-converting enzyme 2 and carboxypeptidase A in the processing of angiotensins within the murine heart. *Exp. Physiol.* 93: 613-621.
9. Liu, J.Q. and Wulff, G. 2008. Functional mimicry of carboxypeptidase A by a combination of transition state stabilization and a defined orientation of catalytic moieties in molecularly imprinted polymers. *J. Am. Chem. Soc.* 130: 8044-8054.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Cpa1 (mouse) mapping to 6 A3.3.

PRODUCT

CPA1 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CPA1 shRNA Plasmid (m): sc-142537-SH and CPA1 shRNA (m) Lentiviral Particles: sc-142537-V as alternate gene silencing products.

For independent verification of CPA1 (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-142537A, sc-142537B and sc-142537C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

CPA1 siRNA (m) is recommended for the inhibition of CPA1 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 μ M in 66 μ l. 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 CPA1 gene expression knockdown using RT-PCR Primer: CPA1 (m)-PR: sc-142537-PR (20 μ l). 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.