SANTA CRUZ BIOTECHNOLOGY, INC.

CPN reg siRNA (h): sc-40427

BACKGROUND

Carboxypeptidase N (arginine carboxypeptidase or CPN) cleaves basic amino acid residues from the carboxy terminal of peptides and proteins. The enzyme plays a central role in regulating the biologic activity of peptides such as kinins and anaphylatoxins, and therefore is also known as kininase-1 and anaphylatoxin inactivator. CPN is a tetrameric complex consisting of two identical regulatory subunits (CPN reg) and two identical catalytic subunits (CPN cat). The two glycosylated CPN reg subunits protect the two CPN cat subunits and keep them in the circulation. CPN reg is a member of the leucine-rich repeat family of proteins and the gene which encodes CPN reg maps to human chromosome 8p22-p23. CPN cat is a member of the regulatory B-type carboxypeptidase group and the gene which encodes CPN cat maps to human chromosome 10.

REFERENCES

1. Erdos, E.G. 1990. Some old and some new ideas on kinin metabolism. J. Cardiovasc. Pharmacol. 15: 20-24.
2. Tan, F., Weerasinghe, D.K., Skidgel, R.A., Tamei, H., Kaul, R.K., Roninson, I.B., Schilling, J.W. and Erdos, E.G. 1990. The deduced protein sequence of the human carboxypeptidase N high molecular weight subunit reveals the presence of leucine-rich tandem repeats. J. Biol. Chem. 265: 13-19.
3. Riley, D.A., Tan, F., Miletich, D.J. and Skidgel, R.A. 1998. Chromosomal localization of the genes for human carboxypeptidase D (CPD) and the active 50-kilodalton subunit of human carboxypeptidase N (CPN1). Genomics 50: 105-108.
4. LocusLink Report (LocusID: 603104). http://www.ncbi.nlm.nih.gov/LocusLink/

CHROMOSOMAL LOCATION

Genetic locus: CPN2 (human) mapping to 3q29.

PRODUCT

CPN reg siRNA (h) 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 CPN reg shRNA Plasmid (h): sc-40427-SH and CPN reg shRNA (h) Lentiviral Particles: sc-40427-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.

PROTOCOLS

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

APPLICATIONS

CPN reg siRNA (h) is recommended for the inhibition of CPN reg 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 CPN reg gene expression knockdown using RT-PCR Primer: CPN reg (h)-PR: sc-40427-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.