SANTA CRUZ BIOTECHNOLOGY, INC.

CPD siRNA (m): sc-142542

BACKGROUND

Members of the M14 metallocarboxypeptidase protein family serve many diverse functions and are divided into three subfamilies based on structure, function and amino acid sequence similarity. CPD (carboxypeptidase D), also known as GP180 or metallocarboxypeptidase D, is a 1,380 amino acid single-pass type I membrane protein that belongs to the peptidase M14 family. CPD binds two zinc ions per subunit and contains three carboxypeptidase-like domains. CPD causes the release of C-terminal arganine and lysine from polypeptides. Highest expression of CPD is found in pancreas, hepatoma cells and placenta, with lower levels in heart, skeletal muscle and colon carcinoma. Mammalian CPD is a homolog of the duck hepatitis B virus-binding protein gp180.

REFERENCES

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4. Hadkar, V., et al. 2001. Carboxypeptidase D is up-regulated in RAW 264.7 macrophages and stimulates nitric oxide synthesis by cells in arginine-free medium. Mol. Pharmacol. 59: 1324-1332.
5. Fan, X., et al. 2002. Immunohistochemical localization of carboxypeptidases D, E, and Z in pituitary adenomas and normal human pituitary. J. Histochem. Cytochem. 50: 1509-1516.
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7. Zhang, H., et al. 2003. Identification and quantification of N-linked glycoproteins using hydrazide chemistry, stable isotope labeling and mass spectrometry. Nat. Biotechnol. 21: 660-666.
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CHROMOSOMAL LOCATION

Genetic locus: Cpd (mouse) mapping to 11 B5.

PRODUCT

CPD 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 CPD shRNA Plasmid (m): sc-142542-SH and CPD shRNA (m) Lentiviral Particles: sc-142542-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

CPD siRNA (m) is recommended for the inhibition of CPD 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 CPD gene expression knockdown using RT-PCR Primer: CPD (m)-PR: sc-142542-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.