SANTA CRUZ BIOTECHNOLOGY, INC.

CPA1 siRNA (h): sc-89710

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

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: CPA1 (human) mapping to 7q32.2.

PRODUCT

CPA1 siRNA (h) 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 CPA1 shRNA Plasmid (h): sc-89710-SH and CPA1 shRNA (h) Lentiviral Particles: sc-89710-V as alternate gene silencing products.

For independent verification of CPA1 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-89710A, sc-89710B and sc-89710C.

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

CPA1 siRNA (h) is recommended for the inhibition of CPA1 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 CPA1 gene expression knockdown using RT-PCR Primer: CPA1 (h)-PR: sc-89710-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.