SANTA CRUZ BIOTECHNOLOGY, INC.

CPA4 siRNA (h): sc-89624

BACKGROUND

CPA4 (carboxypeptidase A4), also known as CPA3 or (carboxypeptidase A3), is a 421 amino acid protein that functions as a metalloprotease and is likely involved in the histone hyperacetylation pathway. A secreted protein and member of the peptidase M14 family, CPA4 is expressed in fetal lung, brain, heart, adrenal gland, intestine, kidney and liver. CPA4 was first identified in PC-3, a prostate cancer cell line, and is also expressed in adult benign hypertrophic prostate. CPA4 is considered a potential marker for aggressive prostate cancer and is upregulated by inhibitors of histone dacetylation. CPA4 binds one zinc ion per subunit and is encoded by a gene that maps to human chromosome 7q32.2. Chromosome 7 houses over 1,000 genes, comprises nearly 5% of the human genome and has been linked to Osteogenesis imperfecta, Pendred syndrome, Lissencephaly, Citrullinemia and Shwachman-Diamond syndrome.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CPA4 (human) mapping to 7q32.2.

PRODUCT

CPA4 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 CPA4 shRNA Plasmid (h): sc-89624-SH and CPA4 shRNA (h) Lentiviral Particles: sc-89624-V as alternate gene silencing products.

For independent verification of CPA4 (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-89624A, sc-89624B and sc-89624C.

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

CPA4 siRNA (h) is recommended for the inhibition of CPA4 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 CPA4 gene expression knockdown using RT-PCR Primer: CPA4 (h)-PR: sc-89624-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.