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CTPS2 siRNA (m): sc-142625

BACKGROUND

CTPS2 (CTP synthase 2), also known as UTP-ammonia ligase 2, is a 586 amino acid protein that contains one glutamine amidotransferase type-1 domain and is involved in pyrimidine metabolism. CTPS2 catalyzes the ATP-dependent conversion of uridine triphosphate (UTP) to cytidine triphosphate (CTP), a rate-limiting reaction that requires either ammonia or L-glutamine as a nitrogen source. Via its catalytic activity, CTPS2 plays an important role in the synthesis of nucleic acids and is crucial for proper cell growth and development. The gene encoding CTPS2 maps to the human X chromosome, which contains nearly 153 million base pairs and houses over 1,000 genes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Ctps2 (mouse) mapping to X F4.

PRODUCT

CTPS2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CTPS2 shRNA Plasmid (m): sc-142625-SH and CTPS2 shRNA (m) Lentiviral Particles: sc-142625-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 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

CTPS2 siRNA (m) is recommended for the inhibition of CTPS2 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 CTPS2 gene expression knockdown using RT-PCR Primer: CTPS2 (m)-PR: sc-142625-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.

PROTOCOLS

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