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CCP4 siRNA (m): sc-142169

BACKGROUND

CCP4 (cytosolic carboxypeptidase 4), also known as AGBL1 (ATP/GTP-binding protein-like 1), is a 1,066 amino acid cytoplasmic protein that belongs to the peptidase M14 family. As a metalloprotease, CCP4 catalyzes the deglutamylation of polyglutamate side chains generated by post-translational polyglutamylation in proteins such as tubulins. In addition, CCP4 removes gene-encoded polyglutamates from the carboxy-terminus of target proteins such as MYLK. Existing as three alternatively spliced isoforms, CCP4 binds one zinc ion per subunit. The gene that encodes CCP4 consists of approximately 887,049 bases and maps to human chromosome 15q25.2. Chromosome 15 houses over 700 genes and comprises nearly 3% of the human genome. Angelman syndrome, Prader-Willi syndrome, Tay-Sachs disease and Marfan syndrome are all associated with defects in chromosome 15-localized genes.

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CHROMOSOMAL LOCATION

Genetic locus: Agbl1 (mouse) mapping to 7 D2.

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.

PRODUCT

CCP4 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CCP4 shRNA Plasmid (m): sc-142169-SH and CCP4 shRNA (m) Lentiviral Particles: sc-142169-V as alternate gene silencing products.

For independent verification of CCP4 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-142169A, sc-142169B and sc-142169C.

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

CCP4 siRNA (m) is recommended for the inhibition of CCP4 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 CCP4 gene expression knockdown using RT-PCR Primer: CCP4 (m)-PR: sc-142169-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.