SANTA CRUZ BIOTECHNOLOGY, INC.

CCP6 siRNA (h): sc-88061

BACKGROUND

The peptidase M14 family of carboxypeptidases (CPs) are involved in various functions throughout the body which include digestion of food and biosynthesis of peptides that function in intercellular signaling. CCP6 (cytosolic carboxypeptidase 6), also known as AGBL4 (ATP/GTP binding protein-like 4), is a 540 amino acid cytoplasmic protein that is expressed in testis, pituitary and brain, with more moderate expression observed in eye, stomach, kidney and adrenal tissue. It is suggested that CCP6 may be involved in processing of cytosolic proteins such as α Tubulin. The gene encoding CCP6 maps to human chromosome 1, the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1 which include Hutchinson-Gilford progeria, familial adenomatous polyposis, Parkinsons, Gaucher disease and Usher syndrome.

REFERENCES

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3. Gregory, S.G., Barlow, K.F., McLay, K.E., Kaul, R., Swarbreck, D., Dunham, A., Scott, C.E., Howe, K.L., Woodfine, K.C., Spencer, C.A., Jones, M.C., Gillson, C., Searle, S., Zhou, Y., Kokocinski, F., McDonald, L. et al. 2006. The DNA sequence and biological annotation of human chromosome 1. Nature 441: 315-321.
4. Kalinina, E., Biswas, R., Berezniuk, I., Hermoso, A., Aviles, F.X. and Fricker, L.D. 2007. A novel subfamily of mouse cytosolic carboxypeptidases. FASEB J. 21: 836-850.
5. Rodriguez de la Vega, M., Sevilla, R.G., Hermoso, A., Lorenzo, J., Tanco, S., Diez, A., Fricker, L.D., Bautista, J.M. and Aviles, F.X. 2007. Nna1-like proteins are active metallocarboxypeptidases of a new and diverse M14 subfamily. FASEB J. 21: 851-865.

CHROMOSOMAL LOCATION

Genetic locus: AGBL4 (human) mapping to 1p33.

PRODUCT

CCP6 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 CCP6 shRNA Plasmid (h): sc-88061-SH and CCP6 shRNA (h) Lentiviral Particles: sc-88061-V as alternate gene silencing products.

For independent verification of CCP6 (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-88061A, sc-88061B and sc-88061C.

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

CCP6 siRNA (h) is recommended for the inhibition of CCP6 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 CCP6 gene expression knockdown using RT-PCR Primer: CCP6 (h)-PR: sc-88061-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.