SANTA CRUZ BIOTECHNOLOGY, INC.

cortistatin siRNA (h): sc-39726

BACKGROUND

Cortistatin is a 155 amino acid protein encoded by the mouse gene Cort. This product of the Cort gene is a neuropeptide with strong structural similarity to somatostatin. It binds to all known Somatostatin receptors, and shares many pharmacological and functional properties with Somatostatin, including the depression of neuronal activity. However, cortistatin also has many properties distinct from Somatostatin, such as induction of slow-wave sleep, apparently by antagonism of the excitatory effects of acetylcholine on the cortex, reduction of locomotor activity and activation of cation selective currents not responsive to Somatostatin.

REFERENCES

1. Fukusumi, S., et al. 1997. Identification and characterization of a novel human cortistatin-like peptide. Biochem. Biophys. Res. Commun. 232: 157-163.
2. de Lecea, L., et al. 1997. Cloning, mRNA expression, and chromosomal mapping of mouse and human preprocortistatin. Genomics 42: 499-506.
3. Puebla, L., et al. 1999. Processing of rat preprocortistatin in mouse AtT-20 cells. J. Neurochem. 73: 1273-1277.
4. Ejeskär, K., et al. 2000. Fine mapping of the human preprocortistatin gene (CORT) to neuroblastoma consensus deletion region 1p36.3→p36.2, but absence of mutations in primary tumors. Cytogenet. Cell Genet. 89: 62-66.
5. Spier, A.D., et al. 2001. Cortistatin: a member of the Somatostatin neuropeptide family with distinct physiological functions. Brain Res. Brain Res. Rev. 33: 228-241.
6. Dalm, V.A., et al. 2003. Expression of Somatostatin, cortistatin, and Somatostatin receptors in human monocytes, macrophages, and dendritic cells. Am. J. Physiol. Endocrinol. Metab. 285: E344-E353.
7. Clark, H.F., et al. 2003. The secreted protein discovery initiative (SPDI), a large-scale effort to identify novel human secreted and transmembrane proteins: a bioinformatics assessment. Genome Res. 13: 2265-2270.

CHROMOSOMAL LOCATION

Genetic locus: CORT (human) mapping to 1p36.22.

PRODUCT

cortistatin siRNA (h) is a pool of 2 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 cortistatin shRNA Plasmid (h): sc-39726-SH and cortistatin shRNA (h) Lentiviral Particles: sc-39726-V as alternate gene silencing products.

For independent verification of cortistatin (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-39726A and sc-39726B.

PROTOCOLS

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

cortistatin siRNA (h) is recommended for the inhibition of cortistatin 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.

GENE EXPRESSION MONITORING

cortistatin (A-7): sc-393108 is recommended as a control antibody for monitoring of cortistatin gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor cortistatin gene expression knockdown using RT-PCR Primer: cortistatin (h)-PR: sc-39726-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.