SANTA CRUZ BIOTECHNOLOGY, INC.

urocortin siRNA (m): sc-39400

BACKGROUND

Urocortins 1, 2 and 3 are the mammalian homologs of fish urotensin I. Mammalian urocortin is a member of the corticotropin-releasing hormone (CRH) family that is expressed in a region of the rat midbrain. The distinct expression pattern in discrete brain regions suggests that it influences such behavior as feeding, anxiety, and auditory processing. Synthetic human urocortin binds with high affinity to CRH receptors and acts *in vitro* to release ACTH from dispersed rat anterior pituitary cells. It is suggested that urocortin may be an endogenous CRF-like factor in the brain responsible for the effects of stress on appetite. The gene which encodes urocortin maps to human chromosome 2. Specifically, urocortin III is a specific ligand for CRF type 2 receptor which mediates stress-coping responses. Human urocortin I and III are expressed in the human heart. Urocortin III is also expressed in the pituitary gland, adrenal gland, GI tract, ovary, spleen, brain and kidney.

REFERENCES

1. Vaughan, J., et al. 1995. The mammalian neuropeptide urocortin, related to fish urotensin I and to corticotropin-releasing factor. Nature 378: 287-292.
2. Donaldson, C.J., et al. 1996. Cloning and characterization of human urocortin. Endocrinology 137: 2167-2170.
3. Spina, M., et al. 1996. Appetite-suppressing effects of urocortin, a CRF-related neuropeptide. Science 273: 1561-1564.
4. Ames, R.S., et al. 1999. Human urotensin-II is a potent vasoconstrictor and agonist for the orphan receptor GPR14. Nature 401: 282-286.
5. Hsu, S.Y., et al. 2001. Human stresscopin and stresscopin-related peptide are selective ligands for the type 2 corticotropin-releasing hormone receptor. Nat. Med. 7: 605-611.
6. Vetter, D.E., et al. 2002. Urocortin-deficient mice show hearing impairment and increased anxiety-like behavior. Nat. Genet. 31: 363-369.
7. Takahashi, K., et al. 2004. Urocortins as cardiovascular peptides. Peptides 25: 1723-1731.

CHROMOSOMAL LOCATION

Genetic locus: Ucn (mouse) mapping to 5 B1.

PRODUCT

urocortin 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see urocortin shRNA Plasmid (m): sc-39400-SH and urocortin shRNA (m) Lentiviral Particles: sc-39400-V as alternate gene silencing products.

For independent verification of urocortin (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-39400A, sc-39400B and sc-39400C.

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

urocortin siRNA (m) is recommended for the inhibition of urocortin 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 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 urocortin gene expression knockdown using RT-PCR Primer: urocortin (m)-PR: sc-39400-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.