

urocortin III (C3): sc-517449

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: UCN3 (human) mapping to 10p15.1; Ucn3 (mouse) mapping to 13 A1.

SOURCE

urocortin III (C3) is a mouse monoclonal antibody raised against a recombinant protein corresponding to amino acids 22-161 of urocortin III of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide, 1% glycerol and 0.1% gelatin.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

urocortin III (C3) is recommended for detection of urocortin III of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for urocortin III siRNA (h): sc-39401, urocortin III siRNA (m): sc-39402, urocortin III shRNA Plasmid (h): sc-39401-SH, urocortin III shRNA Plasmid (m): sc-39402-SH, urocortin III shRNA (h) Lentiviral Particles: sc-39401-V and urocortin III shRNA (m) Lentiviral Particles: sc-39402-V.

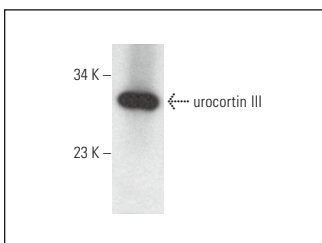
Molecular Weight of urocortin III: 18 kDa.

Positive Controls: mouse heart extract: sc-2254.

RECOMMENDED SUPPORT REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



urocortin III (C3): sc-517449. Western blot analysis of urocortin III expression in mouse heart tissue extract.

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.