

Product Information

Anti-Urocortin

produced in rabbit, IgG fraction of antiserum

Product Number: **U4757**

Product Description

Anti-Urocortin is produced in rabbit using a synthetic peptide K-SQRERAEQNRIIFDSV-NH₂ corresponding to the C-terminus of urocortin (human, amino acids 25-40 with N-terminally added lysine), conjugated to KLH as immunogen. This sequence corresponds to pro-urocortin (amino acids 105-120) and is identical in rat urocortin. Whole antiserum is fractionated and then further purified by ion-exchange chromatography to provide the IgG fraction of antiserum that is essentially free of other rabbit serum proteins.

Anti-Urocortin reacts specifically with urocortin, and does not cross react with corticotropin-releasing factor (CRF). The product may be used in immunohistochemistry. Staining of urocortin by immunohistochemistry is specifically inhibited with urocortin peptide (human, amino acids 25-40 with N-terminally added lysine).

Urocortin (UCN), a 40 amino acids neuropeptide widely distributed in the central nervous system (CNS), belongs to a family of structurally related peptides including corticotropin releasing factor (CRF), sauvagine and urotensin I.^{1,2} Urocortin is derived from a larger precursor protein (pro-urocortin, also named corticotensin).

Urocortin has biological actions similar to CRF such as stress-related endocrine, autonomic and behavioral responses in mammalian species. It is a potent stimulator of adrenocorticotrophic hormone (ACTH) secretion by corticotroph cells from the anterior pituitary *in vitro* and *in vivo*.^{1,3} In the CNS, urocortin acts to produce potent anxiogenic-like and appetite suppressing effects, and peripherally has hypotensive effects.^{1,4,5} Urocortin binds and activates type-1 CRF receptors on pituitary corticotroph cells, and is more potent than CRF at type 2 β CRF receptor (CRFR2 β) in the brain, indicating that it may be the endogenous ligand for CRFR2 β .¹ In addition, urocortin binds with high affinity to a 37 kD soluble plasma CRF-binding protein (CRF-BP), that inactivates CRF. Urocortin is widely distributed in the brain, endocrine organs and digestive tract, with the highest levels in the pituitary.^{6,7}

Reagents

Provided as IgG fraction of antiserum containing 15 mM sodium azide as a preservative.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at 2-8 °C for up to one month.

For extended storage freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a minimum working dilution of 1:200 is determined using formalin-fixed, paraffin-embedded, microwave-treated sections of human placental tissue.

Peptide % Cross-reactivity

Binding @ 50%

Urocortin, rat	100
Urocortin (25-40), (human, rat)	100
CRF (human, rat)	<0.01
CRF (6-33), (human, rat)	<0.01
CRF (sheep)	<0.01
PACAP38	<0.01
ACTH (human)	<0.01
ACTH (18-39), (human)	<0.01
Sauvagine	<0.01

Note: In order to obtain best results and assay sensitivity in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

1. Vaughan, J., et al., *Nature*, **378**, 287 (1995).

2. Donaldson, C.J., et al., *Endocrinology*, **137**, 2167 (1996).
3. Asaba, K., et al., *Brain Res.* **806**, 95 (1998).
4. Moreau, J.L., et al., *Neuroreport*, **8**, 1697 (1997).
5. Spina, M., et al., *Science*, **273**, 1561 (1996).
6. Kozics, T., et al., *J. Comp. Neurol.*, **391**, 1 (1998).
7. Petraglia, F., et al., *J. Clin. Endocrinol. Metab.*, **81**, 3807 (1996).

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