

PRODUCT INFORMATION



Urocortin (rat) (trifluoroacetate salt)

Item No. 24745

CAS Registry No.: 171543-83-2

Formal Name: L- α -aspartyl-L- α -aspartyl-L-prolyl-L-prolyl-L-leucyl-L-seryl-L-isoleucyl-L- α -aspartyl-L-leucyl-L-threonyl-L-phenylalanyl-L-histidyl-L-leucyl-L-leucyl-L-arginyl-L-threonyl-L-leucyl-L-leucyl-L- α -glutamyl-L-leucyl-L-alanyl-L-arginyl-L-threonyl-L-glutamyl-L-seryl-L-glutamyl-L-arginyl-L- α -glutamyl-L-arginyl-L-alanyl-L- α -glutamyl-L-glutamyl-L-asparagyl-L-arginyl-L-isoleucyl-L-isoleucyl-L-phenylalanyl-L- α -aspartyl-L-seryl-L-valinamide, trifluoroacetate salt

H—Asp—Asp—Pro—Pro—Leu—Ser—Ile—Asp—Leu—Thr—

Phe—His—Leu—Leu—Arg—Thr—Leu—Leu—Glu—Leu—

Ala—Arg—Thr—Gln—Ser—Gln—Arg—Glu—Arg—Ala—

Glu—Gln—Asn—Arg—Ile—Ile—Phe—Asp—Ser—Val—NH₂

MF: C₂₀₆H₃₃₈N₆₂O₆₄ • XCF₃COOH

FW: 4,707.3

Purity: $\geq 95\%$

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥ 4 years

• XCF₃COOH

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Urocortin (rat) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the urocortin (rat) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Urocortin (rat) (trifluoroacetate salt) is soluble in the organic solvent formic acid at a concentration of approximately 1 mg/ml.

Description

Urocortin is a neuropeptide hormone and member of the corticotropin-releasing factor (CRF) family which includes mammalian CRF, urocortin II (Item Nos. 24746 | 24747), urocortin III (Item Nos. 24748 | 24749 | 24750), frog sauvagine, and piscine urotensin I.¹ Rat urocortin shares 63 and 45% sequence identity to urotensin and CRF, respectively. It is primarily expressed in the Edinger-Westphal nucleus and lateral superior olive regions in the adult rat brain but can also be expressed in the periphery. Urocortin binds to type 1 and 2 CRF receptors as well as CRF binding protein (CRF-BP) with K_i values of 0.16, 0.41, and 0.10 nM for CRF₁, CRF_{2 β} , and CRF-BP, respectively. It induces cAMP production in CHO cells expressing CRF₁ and CRF_{2 β} (EC₅₀s = 0.8 and 0.18 nM, respectively) and secretion of adrenocorticotrophic hormone (ACTH) by rat anterior pituitary cells (EC₅₀ = 0.006 nM). *In vivo*, urocortin (0.94-18.85 μ g/kg) decreases mean arterial pressure and increases plasma levels of ACTH in rats. Urocortin inhibits gastric emptying of a solid meal in mice and rats and inhibits gastric motility and transit induced by vagal stimulation in rats.² Levels of urocortin mRNA increase in testis in response to ischemia-reperfusion injury in a rat model of testicular torsion.³

References

1. Vaughan, J., Donaldson, C., Bittencourt, J., *et al.* Urocortin, a mammalian neuropeptide related to fish urotensin I and to corticotropin-releasing factor. *Nature* **378**(6554), 287-292 (1995).
2. Martinez, V., Wang, L., Million, M., *et al.* Urocortins and the regulation of gastrointestinal motor function and visceral pain. *Peptides* **25**(10), 1733-1744 (2004).
3. Sumii, K., Miyake, H., Enatsu, N., *et al.* Characterization of urocortin as an anti-apoptotic protein in experimental ischemia-reperfusion model of the rat testis. *Biochem. Biophys. Res. Commun.* **479**(2), 387-392 (2016).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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