

PRODUCT INFORMATION



Urocortin (human) (trifluoroacetate salt)

Item No. 24744

Formal Name: L- α -aspartyl-L-asparaginyl-L-prolyl-L-seryl-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-asparaginyl-L-arginyl-L-isoleucyl-L-isoleucyl-L-phenylalanyl-L- α -aspartyl-L-seryl-L-valinamide, trifluoroacetate salt

H — Asp — Asn — Pro — Ser — 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: C₂₀₄H₃₃₇N₆₃O₆₄ • XCF₃COOH

• XCF₃COOH

FW: 4,696.3

Purity: $\geq 95\%$

Supplied as: A lyophilized powder

Storage: -20°C

Stability: ≥ 4 years

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

Laboratory Procedures

Urocortin (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the urocortin (human) (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Urocortin (human) (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 Human urocortin shares 95% sequence homology with rat urocortin (Item No. 24745). Urocortin binds to type 1 and 2 CRF receptors as well as CRF binding protein (CRF-BP) with K_i values of 0.41, 1.8, 1.5, and 0.22 nM for human CRF₁, rat CRF_{2 α} , mouse CRF_{2 β} , and human CRF-BP, respectively. It induces cAMP production in CHO cells expressing human CRF₁, rat CRF_{2 α} , and mouse CRF_{2 β} receptors (EC₅₀s = 0.22, 0.32, and 0.13 nM, respectively). Urocortin induces secretion of adrenocorticotrophic hormone (ACTH) by rat anterior pituitary cells in a concentration-dependent manner, an effect that can be inhibited by human CRF-BP. It inhibits migration and proliferation of human vascular smooth muscle cells (VSMCs) and reduces LDL-induced foam cell formation *in vitro*.² *In vivo*, urocortin slows development of aortic atherosclerotic lesions in Apoe^{-/-} mice. Urocortin also decreases food intake in food-deprived and non-deprived rats as well as water intake in water-deprived rats in a dose-dependent manner.³

References

1. Donaldson, C.J., Sutton, S.W., Perrin, M.H., *et al.* Cloning and characterization of human urocortin. *Endocrinology* **137**(5), 2167-2170 (1996).
2. Hasegawa, A., Sato, K., Shirai, R., *et al.* Vasoprotective effects of urocortin 1 against atherosclerosis *in vitro* and *in vivo*. *PLoS One* **9**(12):e110866, (2014).
3. Spina, M.G., Merlo-Pich, E., Chan, R.K.W., *et al.* Appetite-suppressing effects of urocortin, a CRF-related neuropeptide. *Science* **273**(5281), 1561-1564 (1996).

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.

WARRANTY AND LIMITATION OF REMEDY

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM