

PRODUCT INFORMATION



Urocortin III (human) (trifluoroacetate salt)

Item No. 24748

Formal Name: L-phenylalanyl-L-threonyl-L-leucyl-L-seryl-L-leucyl-L- α -aspartyl-L-valyl-L-prolyl-L-threonyl-L-asparaginyl-L-isoleucyl-L-methionyl-L-asparaginyl-L-leucyl-L-leucyl-L-phenylalanyl-L-asparaginyl-L-isoleucyl-L-alanyl-L-lysyl-L-alanyl-L-lysyl-L-asparaginyl-L-leucyl-L-arganyl-L-alanyl-L-glutamyl-L-alanyl-L-alanyl-L-alanyl-L-asparaginyl-L-alanyl-L-histidyl-L-leucyl-L-methionyl-L-alanyl-L-glutamyl-L-isoleucinamide, 2,2,2-trifluoroacetate

MF: $C_{185}H_{307}N_{53}O_{50}S_2 \cdot XCF_3COOH$

FW: 4,137.9

Purity: $\geq 95\%$

Supplied as: A lyophilized powder

Storage: $-20^\circ C$

Stability: ≥ 4 years

H—Phe—Thr—Leu—Ser—Leu—Asp—Val—Pro—Thr—Asn—
Ile—Met—Asn—Leu—Leu—Phe—Asn—Ile—Ala—Lys—
Ala—Lys—Asn—Leu—Arg—Ala—Gln—Ala—Ala—Ala—
Asn—Ala—His—Leu—Met—Ala—Gln—Ile—NH₂

• XCF₃COOH

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

Laboratory Procedures

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

Description

Urocortin III is a neuropeptide hormone and member of the corticotropin-releasing factor (CRF) family which includes mammalian CRF, urocortin (Item No. 24745), urocortin II (Item No. 24746), frog sauvagine, and piscine urotensin I.¹ Human urocortin III shares 90, 40, 37, and 21% identity to mouse urocortin III (Item Nos. 24749 | 24750), mouse urocortin II (Item No. 24747), human urocortin (Item No. 24744), and mouse urocortin, respectively. Urocortin III selectively binds to type 2 CRF receptors ($K_{iS} = 21.7, 13.5,$ and >100 nM for rat CRF_{2 α} , rat CRF_{2 β} , and human CRF₁, respectively). It stimulates cAMP production in CHO cells expressing rat CRF_{2 α} and mouse CRF_{2 β} ($EC_{50}S = 0.16$ and 0.12 nM, respectively) as well as cultured anterior pituitary cells expressing endogenous CRF_{2 β} . Urocortin III is co-released with insulin to potentiate glucose-stimulated somatostatin release *in vitro* in human pancreatic β -cells.² *In vivo*, urocortin III reduces food intake in a dose- and time-dependent manner in mice with a minimum effective dose (MED) of 0.3 nmol/animal.³ It increases swimming time in a forced swim test in mice, indicating antidepressant-like activity.⁴

References

1. Lewis, K., Li, C., Perrin, M.H., *et al.* *Proc. Natl. Acad. Sci. U.S.A.* **98**(13), 7570-7575 (2001).
2. van der Meulen, T., Donaldson, C.J., Cáceres, E., *et al.* *Nat. Med.* **21**(7), 769-776 (2015).
3. Pellemounter, M.A., Joppa, M., Ling, N., *et al.* *Peptides* **25**(4), 659-666 (2004).
4. Tanaka, M., Kádár, K., Tóth, G., *et al.* *Brain Res. Bull.* **84**(6), 414-418 (2011).

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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