

PRODUCT INFORMATION



Urotensin II (human) (trifluoroacetate salt)

Item No. 24711

Formal Name: L- α -glutamyl-L-threonyl-L-prolyl-L- α -aspartyl-L-cysteinyl-L-phenylalanyl-L-tryptophyl-L-lysyl-L-tyrosyl-L-cysteinyl-L-valine, cyclic (5 \rightarrow 10)-disulfide, trifluoroacetate salt

Synonym: hU II

MF: C₆₄H₈₅N₁₃O₁₈S₂ • XCF₃COOH

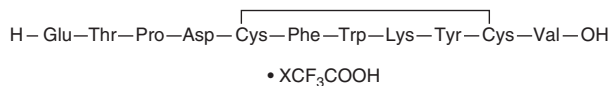
FW: 1,388.6

Purity: \geq 95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

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

Description

Urotensin II is a somatostatin-like neuropeptide agonist of the urotensin II receptor (UTR; K_i = 2 nM).¹ It increases intracellular calcium levels in a concentration-dependent manner in HEK293 cells expressing human UTR (EC₅₀ = 0.6 nM). Urotensin II increases the level of reactive oxygen species (ROS) in pulmonary artery smooth muscle cells and induces proliferation, an effect that is inhibited by depletion of NADPH oxidase subunits.² Urotensin II potently induces contraction of isolated rat thoracic aorta with an EC₅₀ of 0.8 nM.¹ It also induces contraction of isolated cynomolgus monkey arterial, but not venous, vessels and, when administered at doses greater than 100 pmol/kg, can lead to severe myocardial depression and fatal circulatory collapse.

References

1. Ames, R.S., Sarau, H.M., Chambers, J.K., *et al.* Human urotensin-II is a potent vasoconstrictor and agonist for the orphan receptor GPR14. *Nature* **401**, 282-286 (1999).
2. Djordjevic, T., BelAiba, R.S., Bonello, S., *et al.* Human urotensin II is a novel activator of NADPH oxidase in human pulmonary artery smooth muscle cells. *Arterioscler. Thromb. Vasc. Biol.* **25(3)**, 519-525 (2005).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/12/2022

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