

PRODUCT INFORMATION



Urotensin II (goby) (trifluoroacetate salt)

Item No. 24753

Formal Name: L-alanylglycyl-L-threonyl-L-alanyl-L- α -aspartyl-L-cysteinyl-L-phenylalanyl-L-tryptophyl-L-lysyl-L-tyrosyl-L-cysteinyl-L-valine, cyclic (6 \rightarrow 11)-disulfide, trifluoroacetate salt

Synonyms: U-II, Urotensin II (*G. mirabilis*)

MF: C₆₂H₈₄N₁₄O₁₇S₂ • XCF₃COOH

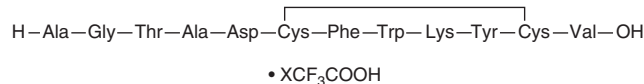
FW: 1,361.5

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

Urotensin II (goby) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the urotensin II (goby) (trifluoroacetate salt) in water. The solubility of urotensin II (goby) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Urotensin II is a peptide vasoconstrictor and agonist of the urotensin (UT) receptor ($K_i = 2.06$ nM for the human recombinant receptor expressed in HEK293 cells).¹ It stimulates intracellular calcium mobilization in HEK293 cells expressing human and rat UT (EC_{50} s = 0.47 and 0.78 nM, respectively) but decreases intracellular calcium concentration in goby (*G. mirabilis*) enterocytes when used at a concentration of 500 nM.² Urotensin II (20 mU/ml) stimulates active sodium and chloride absorption across isolated goby posterior intestine in 5% seawater-adapted solution.³ *In vivo*, urotensin II (1.5-150 nmol/kg) decreases diastolic blood pressure and increases heart rate in anesthetized rats.⁴ It also reduces the pressor responses to sympathetic nerve stimulation, norepinephrine (Item No. 16673), and vasopressin in pithed rats when administered at a dose of 150 nmol/kg.

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**(6750), 282-286 (1999).
2. Loretz, C.A. and Assad, J.A. Urotensin II lowers cytoplasmic free calcium concentration in goby enterocytes: Measurements using quin2. *Gen. Comp. Endocrinol.* **64**(3), 355-361 (1986).
3. Loretz, C.A., Freel, R.W., and Bern, H.A. Specificity of response of intestinal ion transport systems to a pair of natural peptide hormone analogs: Somatostatin and urotensin II. *Gen. Comp. Endocrinol.* **52**(2), 198-206 (1983).
4. Gibson, A., Wallace, P., and Bern, H.A. Cardiovascular effects of urotensin II in anesthetized and pithed rats. *Gen. Comp. Endocrinol.* **64**(3), 435-439 (1986).

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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