

PRODUCT INFORMATION



C-Type Natriuretic Peptide-22 (human, porcine, rat) (trifluoroacetate salt) Item No. 24401

Formal Name: glycyl-L-leucyl-L-seryl-L-lysylglycyl-L-cysteinyl-L-phenylalanylglycyl-L-leucyl-L-lysyl-L-leucyl-L- α -aspartyl-L-arginyl-L-isoleucylglycyl-L-seryl-L-methionyl-L-serylglycyl-L-leucylglycyl-L-cysteine cyclic (6 \rightarrow 22)-disulfide, trifluoroacetate salt

Synonym: CNP-22
MF: C₉₃H₁₅₇N₂₇O₂₈S₃ • XCF₃COOH

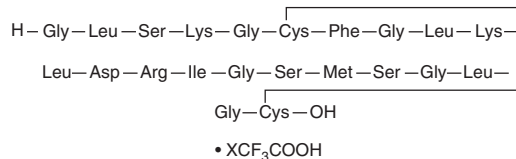
FW: 2,197.6

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

C-Type natriuretic peptide-22 (CNP-22) (human, porcine, rat) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the CNP-22 (human, porcine, rat) (trifluoroacetate salt) in water. The solubility of CNP-22 (human, porcine, rat) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

CNP-22 is an endogenous peptide with diverse biological activities.¹⁻³ Its 22 amino acid sequence corresponds to residues 105-126 of its precursors prepro CNP, pro CNP, and CNP-53.² CNP-22 is a selective agonist of natriuretic peptide receptors (NPRs) 2 and 3 (K_{d} s = 7, 10.8, and $>500,000$ pM for NPR2, 3, and 1, respectively).¹ It stimulates cGMP accumulation in HEK293 cells expressing rat NPR2 (ED_{50} = 2.2 nM) and relaxes isolated rat cerebral arterioles (EC_{50} = 0.52 nM).^{4,5} *In vivo*, CNP-22 (25 μ g/kg) decreases kidney injury and oxidative and inflammatory responses in a rat model of hemorrhagic shock.⁶

References

1. Koller, K.J. and Goeddel, D.V. Molecular biology of the natriuretic peptides and their receptors. *Circulation* **86**(4), 1081-1088 (1992).
2. Barr, C.S., Rhodes, P., and Struthers, A.D. C-type natriuretic peptide. *Peptides* **17**(7), 1243-1251 (1996).
3. Pejchalova, K., Krejci, P., and Wilcox, W.R. C-natriuretic peptide: An important regulator of cartilage. *Mol. Genet. Metab.* **92**(3), 210-215 (2007).
4. Drewett, J.G., Fendly, B.M., Garbers, D.L., *et al.* Natriuretic peptide receptor-B (guanylyl cyclase-B) mediates C-type natriuretic peptide relaxation of precontracted rat aorta. *J. Biol. Chem.* **270**(9), 4668-4674 (1995).
5. Mori, Y., Takayasu, M., Suzuki, Y., *et al.* Vasodilator effects of C-type natriuretic peptide on cerebral arterioles in rats. *Eur. J. Pharmacol.* **320**(2-3), 183-186 (1997).
6. Chen, G., Song, X., Yin, Y., *et al.* C-type natriuretic peptide prevents kidney injury and attenuates oxidative and inflammatory responses in hemorrhagic shock. *Amino Acids* **49**(2), 347-354 (2017).

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, 12/06/2022

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