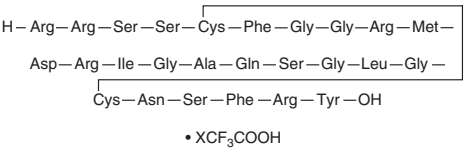
PRODUCT INFORMATION

Atrial Natriuretic Peptide (3-28) (human) (trifluoroacetate salt)

Item No. 24540

Formal Name: L-arginyl-L-arginyl-L-seryl-L-seryl-L-cysteinyl-L-phenylalanylglycylglycyl-L-arginyl-L-methionyl-L-α-aspartyl-L-arginyl-L-isoleucylglycyl-L-alanyl-L-glutaminyl-L-serylglycyl-L-leucylglycyl-L-cysteinyl-L-asparaginyl-L-seryl-L-phenylalanyl-L-arginyl-L-tyrosine, cyclic (5→21)-disulfide, trifluoroacetate salt



Synonym: ANP (3-28) (human)
MF: $C_{118}H_{187}N_{43}O_{36}S_3 \bullet XCF_3COOH$
FW: 2,880.2
Purity: ≥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

Atrial natriuretic peptide (ANP) (3-28) (human) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the ANP (3-28) (human) (trifluoroacetate salt) in water. The solubility of ANP (3-28) (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ANP (3-28) is a synthetic and truncated form of ANP, which is an endogenous peptide generated by proteolysis of prepro-ANP that is secreted by cardiomyocytes in the heart.[1-3] ANP (3-28) potently inhibits renin release from cultured renal juxtaglomerular cells (K_i = 10 pM) in a cGMP-dependent manner.[4] It also dose-dependently decreases mean arterial pressure (MAP) and arterial plasma renin activity and increases fractional sodium and calcium excretion, urine volume, and glomerular filtration rate in conscious dogs with a maximum effect attained when administered at a dose of 200 pM.[5] ANP (3-28) (human) is a 26 amino acid peptide corresponding to the truncated human protein sequence.

References

1. Flynn, T.G., de Bold, M.L., and de Bold, A.J. The amino acid sequence of an atrial peptide with potent diuretic and natriuretic properties. *Biochem. Biophys. Res. Commun.* **117(3)**, 859-865 (1983).
2. Maack, T. Role of atrial natriuretic factor in volume control. *Kidney Int.* **49(6)**, 1732-1737 (1996).
3. Kangawa, K. and Matsuo, H. Purification and complete amino acid sequence of α-human atrial natriuretic polypeptide (α-hANP). *Biochem. Biophys. Res. Commun.* **118(1)**, 131-139 (1984).
4. Kurtz, A., Della Bruna, R., Pfeilshifter, J., *et al.* Atrial natriuretic peptide inhibits renin release from juxtaglomerular cells by a cGMP-mediated process. *Proc. Natl. Acad. Sci. U.S.A.* **83(13)**, 4769-4773 (1986).
5. Seymour, A.A., Smith, S.G., Mazack, E.K., *et al.* A comparison of synthetic rat and human atrial natriuretic factor in conscious dogs. *Hypertension* **8(3)**, 211-216 (1986).

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