

PRODUCT INFORMATION



Atrial Natriuretic Peptide (1-28) (rat) (trifluoroacetate salt)

Item No. 24276

Formal Name: L-seryl-L-leucyl-L-arginyl-L-arginyl-L-seryl-L-seryl-L-cysteinyl-L-phenylalanyl-glycyl-glycyl-L-arginyl-L-isoleucyl-L- α -aspartyl-L-arginyl-L-isoleucyl-glycyl-L-alanyl-L-glutamyl-L-seryl-glycyl-L-leucyl-glycyl-L-cysteinyl-L-asparaginyl-L-seryl-L-phenylalanyl-L-arginyl-L-tyrosine, cyclic (7 \rightarrow 23)-disulfide, trifluoroacetate salt

Synonyms: ANF, ANP, Atrial Natriuretic Factor, α -Atriopeptin (rat)

MF: C₁₂₈H₂₀₅N₄₅O₃₉S₂ • XCF₃COOH

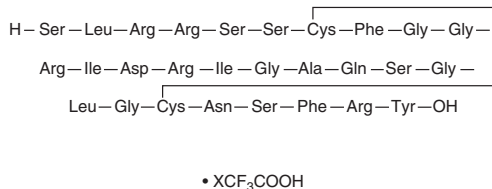
FW: 3,062.4

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

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

Description

ANP is an endogenous peptide generated by proteolysis of prepro-ANP that is secreted by cardiomyocytes in the heart.^{1,2} It has effects on the renal and cardiovascular systems that decrease vasoconstriction, inhibit renin secretion, and increase sodium excretion. In rat kidney cortex *ex vivo*, exogenous rat ANP inhibits basal renin release in a dose-dependent manner and inhibits renin release induced by isoproterenol (Item No. 15592) with an IC₅₀ value of 58 nM.³ ANP (8 μ g/kg) decreases plasma renin activity and cAMP levels in anesthetized rats and increases cGMP levels. It also inhibits arginine vasopressin-induced increases in mean arterial blood pressure in spontaneously hypertensive and control rats when administered intracerebroventricularly at a dose of 150 ng.⁴ ANP (1-28) (rat) is a 28 amino acid peptide corresponding to the rat 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. Obana, K., Naruse, M., Naruse, K., *et al.* Synthetic rat atrial natriuretic factor inhibits *in vitro* and *in vivo* renin secretion in rats. *Endocrinology* **117**(3), 1282-1284 (1985).
4. Stepniakowski, K., Budzikowski, A., Loń, S., *et al.* Central cardiovascular effects of AVP and ANP in normotensive and spontaneously hypertensive rats. *J. Auton. Nerv. Syst.* **47**(1-2), 33-43 (1994).

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

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