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# PRODUCT INFORMATION



## Proadrenomedullin (N-20) (trifluoroacetate salt)

Item No. 27102

<b>Formal Name:</b>	L-alanyl-L-arginyl-L-leucyl-L- $\alpha$ -aspartyl-L-valyl-L-alanyl-L-seryl-L- $\alpha$ -glutamyl-L-phenylalanyl-L-arginyl-L-lysyl-L-lysyl-L-tryptophyl-L-asparagyl-L-lysyl-L-tryptophyl-L-alanyl-L-leucyl-L-seryl-L-argininamide, trifluoroacetate salt	H—Ala—Arg—Leu—Asp—Val—Ala—Ser—Glu—Phe—Arg—Lys—Lys—Trp—Asn—Lys—Trp—Ala—Leu—Ser—Arg—NH <sub>2</sub>
<b>Synonym:</b>	PAMP 20, Proadrenomedullin N-Terminal 20 Peptide (human), ProAM-N20	
<b>MF:</b>	C <sub>112</sub> H <sub>178</sub> N <sub>36</sub> O <sub>27</sub> • XCF <sub>3</sub> COOH	• XCF <sub>3</sub> COOH
<b>FW:</b>	2,460.8	
<b>Purity:</b>	≥95%	
<b>Supplied as:</b>	A solid	
<b>Storage:</b>	-20°C	
<b>Stability:</b>	≥2 years	

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

### Laboratory Procedures

Proadrenomedullin (N-20) (PAMP-20) (human) (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the PAMP-20 (human) (trifluoroacetate salt) in water. The solubility of PAMP-20 (human) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

PAMP-20 is an endogenous peptide with hypotensive activity.<sup>1</sup> It consists of the 20 N-terminal amino acids of proadrenomedullin and is found primarily in human adrenal medulla and pheochromocytoma tissue, with small amounts present in the heart, lung, liver, spleen, pancreas, kidney, small intestine, and cerebral cortex.<sup>2</sup> PAMP-20 is an agonist of the G protein-coupled orphan receptor MRGPRX2 that inhibits forskolin-induced cAMP accumulation in CHO cells expressing the human receptor with an EC<sub>50</sub> value of 251 nM.<sup>3</sup> It inhibits catecholamine secretion and sodium and calcium influx induced by the acetylcholine receptor (AChR) agonist carbachol (Item No. 14486) in bovine adrenal medullary cells *in vitro* (IC<sub>50</sub>s = 1.6, 2.5, and 1  $\mu$ M, respectively).<sup>4</sup> PAMP-20 induces a hypotensive response in anesthetized rats when administered at doses of 10, 20, and 50 nmol/kg by intravenous bolus injection.<sup>1</sup> It also dose-dependently reduces systemic arterial and hindlimb perfusion pressure in anesthetized cats when injected intravenously or into the hindlimb perfusion circuit, respectively, indicating vasodilator activity.<sup>5</sup>

### References

1. Kitamura, K., Kangawa, K., Ishiyama, Y., *et al.* Identification and hypotensive activity of proadrenomedullin N-terminal 20 peptide (PAMP). *FEBS Lett.* **351(1)**, 35-37 (1994).
2. Washimine, H., Kitamura, K., Ichiki, Y., *et al.* Immunoreactive proadrenomedullin N-terminal 20 peptide in human tissue, plasma and urine. *Biochem. Biophys. Res. Commun.* **202(2)**, 1081-1087 (1994).
3. Kamohara, M., Matsuo, A., Takasaki, J., *et al.* Identification of MrgX2 as a human G-protein-coupled receptor for proadrenomedullin N-terminal peptides. *Biochem. Biophys. Res. Commun.* **330(4)**, 1146-1152 (2005).
4. Katoh, F., Kitamura, K., Niina, H., *et al.* Proadrenomedullin N-terminal 20 peptide (PAMP), an endogenous anticholinergic peptide: Its exocytotic secretion and inhibition of catecholamine secretion in adrenal medulla. *J. Neurochem.* **64(1)**, 459-461 (1995).
5. Champion, H.C., Murphy, W.A., Coy, D.H., *et al.* Proadrenomedullin NH<sub>2</sub>-terminal 20 peptide has direct vasodilator activity in the cat. *Am. J. Physiol.* **272(4 Pt. 2)**, R1047-R1054 (1997).

#### 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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