

PRODUCT INFORMATION



α -CGRP (rat) (trifluoroacetate salt)

Item No. 24728

Formal Name: L-seryl-L-cysteinyl-L-asparaginyl-L-threonyl-L-alanyl-L-threonyl-L-cysteinyl-L-valyl-L-threonyl-L-histidyl-L-arginyl-L-leucyl-L-alanylglycyl-L-leucyl-L-leucyl-L-seryl-L-arginyl-L-serylglycylglycyl-L-valyl-L-valyl-L-lysyl-L- α -aspartyl-L-asparaginyl-L-phenylalanyl-L-valyl-L-prolyl-L-threonyl-L-asparaginyl-L-valylglycyl-L-seryl-L- α -glutamyl-L-alanyl-L-phenylalaninamide, cyclic (2 \rightarrow 7)-disulfide, trifluoroacetate salt

Synonyms: Calcitonin Gene-Related Peptide-1 (rat), α -Calcitonin Gene-Related Peptide (rat), CGRP-1 (rat)

MF: C₁₆₂H₂₆₂N₅₀O₅₂S₂ • XCF₃COOH

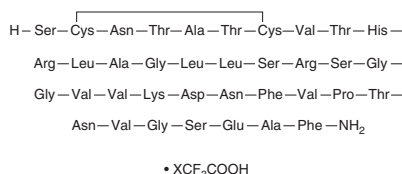
FW: 3,806.3

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

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

Description

α -Calcitonin gene-related peptide (α -CGRP) is a neuropeptide with roles in vasodilation, cardiovascular regulation, and inflammation.¹ It belongs to the calcitonin family of peptides, which also includes amylin (Item No. 24274), calcitonin (Item Nos. 24409 | 24410), and adrenomedullin.² α -CGRP binds selectively to heterotrimeric complexes of calcitonin receptor-like receptor (CRLR) and receptor activity-modifying proteins RAMP 1 or 3 (RAMP1 and 3; IC₅₀s = 7 and 23 nM, respectively) over a complex of CRLR and RAMP2 (IC₅₀ = >1,000 nM).³ It binds to rat brain and spleen membrane preparations (IC₅₀s = 3.9 and 3.5 nM, respectively) and relaxes human cerebral and middle meningeal arterial segments precontracted with prostaglandin F_{2 α} (PGF_{2 α} ; Item No. 16010; IC₅₀s = 0.23 and 2.24 nM, respectively).^{4,5} *In vivo*, α -CGRP (0.01-3,000 ng/kg) decreases mean arterial blood pressure (MABP) and increases pial arteriole (PA) and middle meningeal artery (MMA) diameters in rats with closed cranial windows.⁶ It induces a 50% increase in diameter of arterioles precontracted with human endothelin-1 (ET-1; Item No. 24127) *in vivo* in hamster cheek pouch at a concentration of 39.8 pM.⁷

References

1. Russell, F.A., King, R., Smillie, S.-J., et al. *Physiol. Rev.* **94**(4), 1099-1142 (2014).
2. Wimalawansa, S.J. *Crit. Rev. Neurobiol.* **11**(2-3), 167-239 (1997).
3. Husmann, K., Born, W., Fischer, J.A., et al. *Biochem. Pharmacol.* **66**(11), 2107-2115 (2003).
4. Dennis, T., Fournier, A., St. Pierre, S., et al. *J. Pharmacol. Exp. Ther.* **251**(2), 718-725 (1989).
5. Jansen-Olesen, I., Jørgensen, L., Engel, U., et al. *Eur. J. Pharmacol.* **481**(2-3), 207-216 (2003).
6. Petersen, K.A., Birk, S., Doods, H., et al. *Br. J. Pharmacol.* **143**(6), 697-704 (2004).
7. Hall, J.M. and Brain, S.D. *Br. J. Pharmacol.* **126**(1), 280-284 (1999).

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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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