

PRODUCT INFORMATION



β -CGRP (human) (trifluoroacetate salt)

Item No. 24725

Formal Name: 3-L-asparagine-22-L-methionine-25-L-serine- α -calcitonin gene-related peptide (human), trifluoroacetate salt

Synonyms: Calcitonin Gene-Related Peptide-2 (human), β -Calcitonin Gene-Related Peptide (human), CGRP-2 (human)

MF: C₁₆₂H₂₆₇N₅₁O₄₈S₃ • XCF₃COOH

FW: 3,793.4

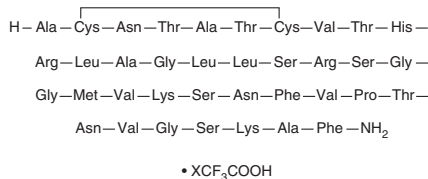
Purity: \geq 95%

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

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

Description

β -Calcitonin gene-related peptide (β -CGRP) is a neuropeptide with roles in vasodilation, cardiovascular regulation, and inflammation.¹ It belongs to the calcitonin family of peptides, which also includes α -CGRP (Item Nos. 24405 | 24728), amylin (Item No. 24274), calcitonin (Item Nos. 24409 | 24410), and adrenomedullin.² β -CGRP binds selectively to a heteromeric complex of calcitonin receptor-like receptor (CRLR) and receptor activity-modifying protein 1 (RAMP1; IC₅₀ = 0.01 nM) over a complex of CLCR and RAMP2 (IC₅₀ = 300 nM).³ It binds to rat brain and spleen membrane preparations (IC₅₀s = 1.1 and 1 nM, respectively) and relaxes human cerebral and middle meningeal arterial segments precontracted with prostaglandin F_{2 α} (PGF_{2 α} ; Item No. 16010; IC₅₀s = 0.38 and 4.9 nM, respectively).^{4,5} *In vivo*, β -CGRP induces a 50% increase in diameter of arterioles precontracted with human endothelin-1 (ET-1; Item No. 24127) in hamster cheek pouch at a concentration of 15.8 pM.⁶

References

1. Russell, F.A., King, R., Smillie, S.-J., *et al.* Calcitonin gene-related peptide: Physiology and pathophysiology. *Physiol. Rev.* **94**(4), 1099-1142 (2014).
2. Wimalawansa, S.J. Amylin, calcitonin gene-related peptide, calcitonin, and adrenomedullin: A peptide superfamily. *Crit. Rev. Neurobiol.* **11**(2-3), 167-239 (1997).
3. McLatchie, L.M., Fraser, N.J., Main, M.J., *et al.* RAMPs regulate the transport and ligand specificity of the calcitonin-receptor-like receptor. *Nature* **393**(6683), 333-339 (1998).
4. Dennis, T., Fournier, A., St. Pierre, S., *et al.* Structure-activity profile of calcitonin gene-related peptide in peripheral and brain tissues. Evidence for receptor multiplicity. *J. Pharmacol. Exp. Ther.* **251**(2), 718-725 (1989).
5. Jansen-Olesen, I., Jørgensen, L., Engel, U., *et al.* In-depth characterization of CGRP receptors in human intracranial arteries. *Eur. J. Pharmacol.* **481**(2-3), 207-216 (2003).
6. Hall, J.M. and Brain, S.D. Interaction of amylin with calcitonin gene-related peptide receptors in the microvasculature of the hamster cheek pouch *in vivo*. *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.

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