

PRODUCT INFORMATION



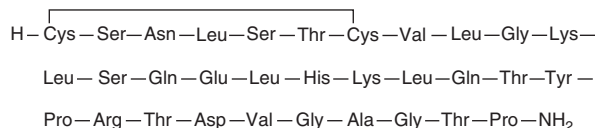
Calcitonin (eel)

Item No. 31487

CAS Registry No.: 57014-02-5

Formal Name: 26-L-aspartic acid-27-L-valine-29-L-alanine-calcitonin (salmon)

Synonyms: eCT, Elcatonin, H-CSNLSTCVLGKLSQEL
HKLQTYPRTDVGAGTP-NH₂, H-Cys-Ser-Asn-Leu-Ser-Thr-Cys-Val-Leu-Gly-Lys-Leu-Ser-Gln-Glu-Leu-His-Lys-Leu-Gln-Thr-Tyr-Pro-Arg-Thr-Asp-Val-Gly-Ala-Gly-Thr-Pro-NH₂



MF: C₁₄₆H₂₄₁N₄₃O₄₇S₂

FW: 3,414.9

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

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

Laboratory Procedures

Calcitonin (eel) is supplied as a solid. A stock solution may be made by dissolving the calcitonin (eel) in water. The solubility of calcitonin (eel) in water is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Calcitonin is a 32-amino acid peptide hormone that lowers blood calcium levels and inhibits bone resorption.^{1,2} The amino acid sequence of eel calcitonin varies from salmon (Item No. 24410) and human (Item No. 24409) calcitonin at 3 and 16 positions, respectively.³ Calcitonin (eel) binds to calcitonin receptor 2 (CTR2) with higher affinity than human, porcine, or rat calcitonin (K_is = 0.01, 2.95, 0.44, and 5.89 nM, respectively, in radioligand binding assays). It inhibits gastric emptying in conscious dogs more potently than human calcitonin when administered at a dose of 10 µg/kg.^{3,4} Calcitonin (eel) increases the paw withdrawal threshold in a mouse model of carrageenan-induced inflammation when administered at a dose of 0.2 µg/paw.⁵

References

1. Foster, G.V. Calcitonin. A review of experimental and clinical investigations. *Postgrad. Med. J.* **44(511)**, 411-422 (1968).
2. Chesnut, C.H., III, Azria, M., Silverman, S., et al. Salmon calcitonin: A review of current and future therapeutic indications. *Osteoporos. Int.* **19(4)**, 479-491 (2008).
3. Chen, W.-J., Armour, S., Way, J., et al. Expression cloning and receptor pharmacology of human calcitonin receptors from MCF-7 cells and their relationship to amylin receptors. *Mol. Pharmacol.* **52(6)**, 1164-1175 (1997).
4. Nakamura, H., Asano, T., and Takeda, K. Gastrointestinal motor inhibition by exogenous human, salmon, and eel calcitonin in conscious dogs. *Can. J. Physiol. Pharmacol.* **73(1)**, 43-49 (1995).
5. Guidobono, F., Netti, C., Villani, P., et al. Antinociceptive activity of eel calcitonin, injected into the inflamed paw in rats. *Neuropharmacology* **30(12A)**, 1275-1278 (1991).

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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