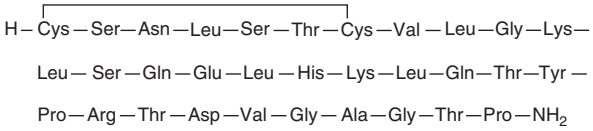
PRODUCT INFORMATION

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-NH_2, 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-NH_2
MF: $C_{146}H_{241}N_{43}O_{47}S_2$
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).

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