
Product Data Sheet

Product Name: Calcitonin, eel (Thyrocalcitonin eel)

Cat. No.: GC30291

Chemical Properties

Cas. No. 57014-02-5

SMILES 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 (Disulfide bridge: Cys1-Cys7)

Formula C₁₄₆H₂₄₁N₄₃O₄₇S₂ M.Wt 3414.91

Solubility Water: 10 mg/ml Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

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 and human 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_ds = 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

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

Caution: Product has not been fully validated for medical applications. For research use only.

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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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