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- Trockeneiszuschlag
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- Expressversand

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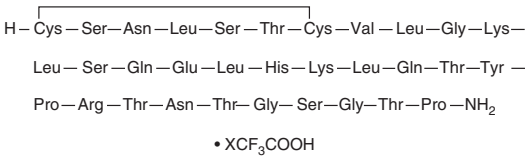
PRODUCT INFORMATION

Calcitonin (salmon) (trifluoroacetate salt)

Item No. 24410

CAS Registry No.: 171052-37-2
Formal Name: L-cysteinyl-L-seryl-L-asparaginyl-L-leucyl-L-seryl-L-threonyl-L-cysteinyl-L-valyl-L-leucylglycyl-L-lysyl-L-leucyl-L-seryl-L-glutaminyl-L-α-glutamyl-L-leucyl-L-histidyl-L-lysyl-L-leucyl-L-glutaminyl-L-threonyl-L-tyrosyl-L-prolyl-L-arginyl-Lthreonyl-L-asparaginyl-L-threonylglycyl-L-serylglycyl-L-threonyl-L-prolinamide, cyclic (1→7)-disulfide, trifluoroacetate salt
Synonyms: Calcitonin (1-32) (salmon), Salcatonin, sCT, Thyrocalcitonin (salmon)
MF: $C_{145}H_{240}N_{44}O_{48}S_2$ • XCF3COOH
FW: 3,431.9
Purity: ≥95%
Supplied as: A lyophilized powder
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

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

Description

Calcitonin is a peptide hormone that lowers blood calcium level and inhibits bone resorption.[1,2] It belongs to the calcitonin family of peptides, which also includes amylin (Item No. 24274), calcitonin gene-related peptide (Item No. 24405), and adrenomedullin.[3] The binding of salmon calcitonin to the human calcitonin receptor (CTR) is not modulated by receptor activity-modifying proteins (RAMPs), which influence affinity of human calcitonin (Item No. 24409) to CTR.[4,5] Salmon calcitonin binds to human CTR2 with IC_{50} values of 0.933, 0.224, 0.134, and 0.317 nM alone and with RAMP1, 2, or 3, respectively. It induces cAMP accumulation in COS-7 cells transfected with CTR2 (EC_{50} = 0.166 nM).[6] Salmon calcitonin inhibits bone resorption by osteoclasts in a pit formation assay using rat bone slices (ID_{50} = 0.003 pg/mL) and lowers calcium level *in vivo* in a bioassay of hypocalcemia in rats (ED_{15} = 33.9 mg/kg).[7] Formulations containing salmon calcitonin have been used to treat hypercalcemia, bone destruction by osteoporosis, and Paget's disease.[2]

References

1. Foster, G.V. *Postgrad. Med. J.* **44(511)**, 411-422 (1968).
2. Chesnut, C.H., III, Azria, M., Silverman, S., *et al. Osteoporos. Int.* **19(4)**, 479-491 (2008).
3. Wimalawansa, S.J. *Crit. Rev. Neurobiol.* **11(2-3)**, 167-239 (1997).
4. Muff, R., Bühlmann, N., Fischer, J.A., *et al. Endocrinology* **140(6)**, 2924-2927 (1999).
5. Christopoulos, G., Perry, K.J., Morfis, M., *et al. Mol. Pharmacol.* **56(1)**, 235-242 (1999).
6. Udawela, M., Christopoulos, G., Tilakaratne, N., *et al. Mol. Pharmacol.* **69(6)**, 1984-1989 (2006).
7. McSheehy, P.M., Farina, C., Airaghi, R., *et al. Bone* **16(4)**, 435-444 (1995).

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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