

PRODUCT INFORMATION



AC 187 (trifluoroacetate salt)

Item No. 35839

Formal Name:	N-acetyl-30-L-asparagine-32-L-tyrosinamide-8-32-calcitonin (salmon reduced), trifluoroacetate salt		
Synonyms:	Acetyl-(Asn ³⁰ ,Tyr ³²)-Calcitonin ₈₋₃₂ , Acetyl-[Asn ³⁰ ,Tyr ³²]Salmon Calcitonin (8 -37), Acetyl-[Asn ³⁰ ,Tyr ³²] sCT(8 -37)	Ac—Val—Leu—Gly—Lys—Leu—Ser—Gln—Glu—Leu—His— Lys—Leu—Gln—Thr—Tyr—Pro—Arg—Thr—Asn—Thr— Gly—Ser—Asn—Thr—Tyr—NH ₂	
Peptide Sequence:	Ac-VLGKLSQELHKLQTYPRNTGSENTY-NH ₂		
MF:	C ₁₂₇ H ₂₀₅ N ₃₇ O ₄₀ • XCF ₃ COOH		
FW:	2,890.2		
Purity:	≥95%		• XCF ₃ COOH
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

AC 187 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the AC 187 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. AC 187 (trifluoroacetate salt) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of AC 187 (trifluoroacetate salt) in these solvents is approximately 10 and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of AC 187 (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of AC 187 (trifluoroacetate salt) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

AC 187 is a synthetic peptide that corresponds to amino acids 8-32 of salmon calcitonin (sCT; Item No. 24410) and an antagonist of calcitonin and amylin receptors.¹ It inhibits human calcitonin-induced cAMP accumulation in COS-7 cells expressing the human calcitonin receptor or the human amylin receptors AMY_{1a} or AMY_{3a} (pK_Bs = 7.15, 7.3, and 7.37, respectively). AC 187 (10 μM) protects against apoptosis induced by amyloid-β (1-42) (Aβ₄₂; Item No. 20574) in primary rat basal forebrain neurons.² Intrathecal administration of AC 187 (50 μl of a 3 μg/μl solution) increases the paw withdrawal threshold in the von Frey test in a rat model of chronic peripheral neuropathic pain induced by spared nerve injury.³ AC 187 (10 μg/kg) reverses sCT-induced decreases in food intake in food-deprived rats.⁴

References

1. Hay, D.L., Christopoulos, G., Christopoulos, A., *et al.* Pharmacological discrimination of calcitonin receptor: Receptor activity-modifying protein complexes. *Mol. Pharmacol.* **67**(5), 1655-1665 (2005).
2. Jhamandas, J.H. and MacTavish, D. Antagonist of the amylin receptor blocks β-amyloid toxicity in rat cholinergic basal forebrain neurons. *J. Neurosci.* **24**(24), 5579-5584 (2001).
3. Almeida, L.S., Castro-Lopes, J.M., Neto, F.L., *et al.* Amylin, a peptide expressed by nociceptors, modulates chronic neuropathic pain. *Eur. J. Pain* **23**(4), 784-799 (2018).
4. Lutz, T.A., Tschudy, S., Rushing, P.A., *et al.* Amylin receptors mediate the anorectic action of salmon calcitonin (sCT). *Peptides* **21**(2), 233-238 (2000).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM