

Product Data Sheet

Product Name: TCMCB07 (trifluoroacetate salt)

Cat. No.: GC92097

Chemical Properties

Cas. No.

Chemical Name N-acetyl-L-norleucyl-L- α -aspartyl-L-prolyl-3-(2-naphthalenyl)-D-alanyl-L-arginyl-L-tryptophyl-L-lysyl-D-valyl-D-prolinamide, (2 $\rightarrow$ 7)-lactam, trifluoroacetate salt

SMILES O=C([C@@H](NC([C@H](NC([C@@H]1([H])N(CCC1)C([C@H](CC(NCCCC[C@H](NC2=O)C(N[C@H](C(C)C)C(N3[C@H](CCC3)C(N)=O)=O)=O)NC([C@H](CCCC)NC(C)=O)=O)=O)CC4=CC5=C(C=CC=C5)C=C4)=O)CCCN(C)=N)N[C@H]2CC6=CNC7=CC=CC=C67.OC(F)(F)F=O

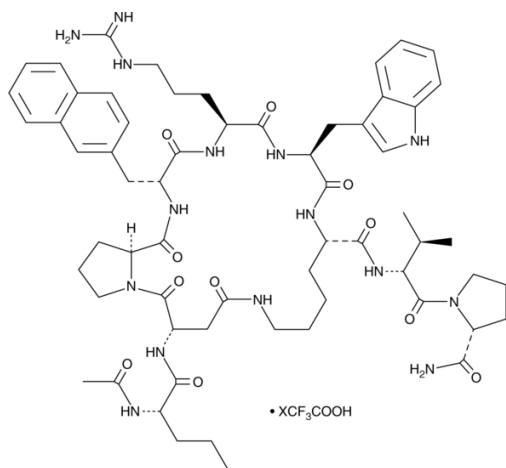
Formula $C_{63}H_{87}N_{15}O_{11} \cdot XCF_3COOH$ M.Wt 1230.5

Solubility DMSO: Soluble: ≥ 10 mg/ml, Ethanol: Soluble: ≥ 10 mg/ml Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ 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

TCMCB07 is a peptide antagonist of melanocortin receptor 1 (MC1R), MC3R, MC4R, and MC5R

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

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(IC₅₀s = 19.5, 0.59, 13.58, and 8.07 nM, respectively, for the human receptors).¹ It is also an antagonist of dog MC1R, MC3R, MC4R, and MC5R receptors (IC₅₀s = 53.64, 1.46, 7.14, and 11.22 nM, respectively). TCMCB07 (10 mg/kg) increases food intake and body weight in a rat model of LPS-induced cachexia. It increases body weight, muscle mass, blood levels of urea nitrogen, and mean heart rate in dogs with cachexia when administered at a dose of 0.75 mg/kg per day.²

References:

- [1]. Gruber, K.A., Ji, R.L., Gallazzi, F., et al. Development of a therapeutic peptide for cachexia suggests a platform approach for drug-like peptides ACS Pharmacol. Transl. Sci. 5(5)344-361(2022).
- [2]. Axiak-Bechtel, S.M., Leach, S.B., Newton-Northup, J.R., et al. Safety of TCMCB07, a melanocortin-4 antagonist peptide, in dogs with naturally occurring cachexia J. Vet. Intern. Med. 37(6)2344-2355(2023).

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