

PRODUCT INFORMATION



TCMCB07 (trifluoroacetate salt)

Item No. 41545

Formal 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

Synonyms: Ac-Nle-Asp-Pro-D-2Nal-Arg-Trp-Lys-D-Val-D-Pro-NH₂, Mifomelatide

Peptide Sequence: Ac-XDPzR_WKvp-NH₂ (X = norisoleucine; z = 3-(2-naphthyl)-D-alanine)

MF: C₆₃H₈₇N₁₅O₁₁ • XCF₃COOH

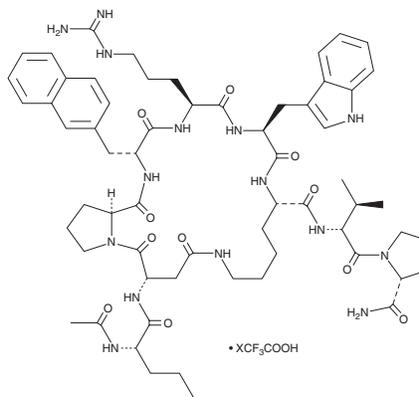
FW: 1,230.5

Purity: \geq 98%

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years



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

Laboratory Procedures

TCMCB07 (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the TCMCB07 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. TCMCB07 (trifluoroacetate salt) is soluble (\geq 10 mg/ml) in ethanol and DMSO.

Description

TCMCB07 is a peptide antagonist of melanocortin receptor 1 (MC1R), MC3R, MC4R, and MC5R (IC_{50} s = 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 (IC_{50} s = 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).

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.

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