

PRODUCT INFORMATION



Manzamine A

Item No. 21444

CAS Registry No.: 104196-68-1
Formal Name: (1R,4S,9Z,13S,13aR,20aR,21aR)-2,3,5,6,7,8,11,12,15,16,17,18,20a,21-tetradecahydro-24-(9H-pyrido[3,4-b]indol-1-yl)-1,13-etheno-4,21a-methano-1H-azocino[1',2':1,5]pyrrolo[3,2-e]azacyclopentadecin-13(13aH)-ol

Synonym: Keramamine A

MF: C₃₆H₄₄N₄O

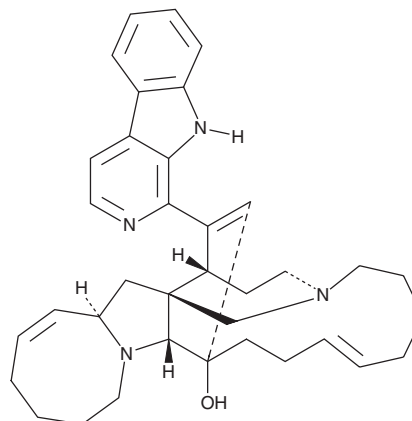
FW: 548.8

Purity: ≥98%

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

Manzamine A is supplied as a solid. A stock solution may be made by dissolving the manzamine A in the solvent of choice. Manzamine A is soluble in organic solvents such as ethanol, methanol, and DMSO, which should be purged with an inert gas.

Description

Manzamine A is a β -carboline alkaloid with diverse activities that has been found in marine sponges, including *X. ashmorica*.¹ It is an inhibitor of glycogen synthase kinase 3 β (GSK3 β) and cyclin-dependent kinase 5 (CDK5; IC₅₀s = 10.2 and 1.5 μ M, respectively).² It inhibits the growth of L5178y mouse lymphoma cells with an ED₅₀ value of 1.8 μ g/mL.¹ In an agar diffusion assay, manzamine A inhibits the growth of *B. subtilis* and *S. aureus*, but not *E. coli* bacteria. It reduces the reverse transcriptase (RT) activity in supernatant from HIV-1-infected peripheral blood mononuclear cells (PBMCs; EC₅₀ = 4.2 μ M).³ *In vivo*, manzamine A (100 μ mol/kg, i.p.) has antimalarial activity and reduces the amount of *P. berghei* in infected mice by over 90% relative to the control.⁴

References

1. Edrada, R.A., Proksch, P., Wray, V., *et al.* Four new bioactive manzamine-type alkaloids from the Philippine marine sponge *Xestospongia ashmorica*. *J. Nat. Prod.* **59(11)**, 1056-1060 (1996).
2. Hamann, M., Alonso, D., Martín-Aparicio, E., *et al.* Glycogen synthase kinase-3 (GSK-3) inhibitory activity and structure-activity relationship (SAR) studies of the manzamine alkaloids. Potential for Alzheimer's disease. *J. Nat. Prod.* **70(9)**, 1397-1405 (2007).
3. Rao, K.V., Donia, M.S., Peng, J., *et al.* Manzamine B and E and ircular A related alkaloids from an Indonesian *Acanthostrongylophora* sponge and their activity against infectious, tropical parasitic, and Alzheimer's diseases. *J. Nat. Prod.* **69(7)**, 1034-1040 (2006).
4. Ang, K.K., Holmes, M.J., Higa, T., *et al.* *In vivo* antimalarial activity of the beta-carboline alkaloid manzamine A. *Antimicrob. Agents Chemother.* **44(6)**, 1645-1649 (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

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