



LKT Laboratories, Inc.

Manzamine A

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Product Information

Product ID M0255

CAS No. 104196-68-1

Chemical Name

Synonym Keramamine A

Formula $C_{36}H_{44}N_4O$

Formula Wt. 548.76

Melting Point

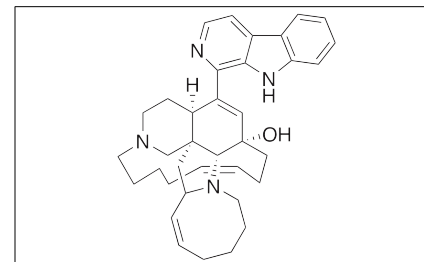
Purity $\geq 98\%$

Solubility

Store Temp $-20^{\circ}C$

Ship Temp Ambient

Description Manzamine A is an alkaloid found in marine sponges. Manzamine A exhibits neuroprotective, anticancer, anti-hyperlipidemic, anti-atherosclerotic, antibiotic, and antiviral activities. In vitro, manzamine A uncouples vacuolar ATPases, inhibiting autophagy and tumor growth. Manzamine A inhibits foam cell formation in macrophages, a hallmark of atherosclerosis. Additionally, manzamine A inhibits cholesterol ester formation and acyl-CoA:cholesterol acyl-transferase (ACAT) activity in vitro and decreases total cholesterol, triglycerides, and LDL levels in vivo. This compound displays antibacterial activity against gram positive and gram negative bacteria; it may also exhibit anti-parasitic activity. In corneal cells, manzamine A inhibits viral replication and infection of herpes simplex virus a (HSV-1), inhibiting HSV-1 virion host shutoff activity. In neuroblastoma cells, manzamine A displays potential benefit in the treatment of Alzheimer's disease by decreasing tau hyperphosphorylation and inhibiting glycogen synthase kinase 3 (GSK3).



Bulk quantities available upon request

Product ID	Size
M0255	1 mg
M0255	5 mg
M0255	10 mg

References Kallifatidis G, Hoepfner D, Jaeg T, et al. The marine natural product manzamine A targets vacuolar ATPases and inhibits autophagy in pancreatic cancer cells. *Mar Drugs*. 2013 Sep 17;11(9):3500-16. PMID: 24048269.

EGUCHI K, FUJIWARA Y, HAYASHIDA A, et al. Manzamine A, a marine-derived alkaloid, inhibits accumulation of cholesterol ester in macrophages and suppresses hyperlipidemia and atherosclerosis in vivo. *Bioorg Med Chem*. 2013 Jul 1;21(13):3831-8. PMID: 23665143.

Aqil F, Zahin M, El Sayed KA, et al. Antimicrobial, antioxidant, and antimutagenic activities of selected marine natural products and tobacco cembranoids. *Drug Chem Toxicol*. 2011 Apr;34(2):167-79. PMID: 21314466.

Palem JR, Bedadala GR, El Sayed KA, et al. Manzamine A as a novel inhibitor of herpes simplex virus type-1 replication in cultured corneal cells. *Planta Med*. 2011 Jan;77(1):46-51. PMID: 20645244.

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*. 2007 Sep;70(9):1397-405. PMID: 17708655.

Winkler JD, Londregan AT, Hamann MT. Antimalarial activity of a new family of analogues of manzamine A. *Org Lett*. 2006 Jun 8;8(12):2591-4. PMID: 16737321.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.