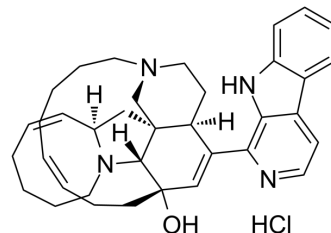


Manzamine A hydrochloride

Cat. No.:	HY-117025A
CAS No.:	104264-80-4
Molecular Formula:	C ₃₆ H ₄₅ ClN ₄ O
Molecular Weight:	585.22
Target:	GSK-3; CDK; Parasite; HIV; Proton Pump; Autophagy
Pathway:	PI3K/Akt/mTOR; Stem Cell/Wnt; Cell Cycle/DNA Damage; Anti-infection; Membrane Transporter/Ion Channel; Autophagy
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Manzamine A hydrochloride, an orally active beta-carboline alkaloid, inhibits specifically GSK-3 β and CDK-5 with IC ₅₀ s of 10.2 and 1.5 μ M, respectively. Manzamine A hydrochloride targets vacuolar ATPases and inhibits autophagy in pancreatic cancer cells. Manzamine A hydrochloride has antimalarial and anticancer activities. Manzamine A hydrochloride also shows potent activity against HSV-1 ^{[1][2][3][4]} .			
IC₅₀ & Target	GSK-3 β 10.2 μ M (IC ₅₀)	CDK5 1.5 μ M (IC ₅₀)	HIV-1	vacuolar ATPases
	Malaria			
In Vitro	Manzamine A increases acidity in pancreatic cancer cells and non-malignant Vero cells. manzamine A is a potential inhibitor of autophagy by preventing autophagosome turnover. Manzamine A (10 μ M; 2 hours; AsPC-1 cells) clearly induced an accumulation of p62 confirming an inhibition of autophagosome turnover ^[2] . Manzamine A represents an important lead structure for the development of novel antimalarial chemotherapies ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.			

REFERENCES

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- [2]. Winkler JD, et al. Antimalarial activity of a new family of analogues of manzamine A. *Org Lett.* 2006;8(12):2591-2594.
- [3]. Kallifatidis G, et al. The marine natural product manzamine A targets vacuolar ATPases and inhibits autophagy in pancreatic cancer cells [published correction appears in *Mar Drugs.* 2014;12(4):2305-7]. *Mar Drugs.* 2013;11(9):3500-3516. Published 2013 Sep 17.
- [4]. Palem JR, et al. Manzamine A as a novel inhibitor of herpes simplex virus type-1 replication in cultured corneal cells. *Planta Med.* 2011;77(1):46-51.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA