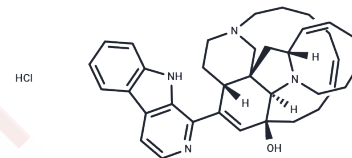


## Manzamine A hydrochloride

## Chemical Properties

CAS No. :	104264-80-4
Formula:	C <sub>36</sub> H <sub>45</sub> ClN <sub>4</sub> O
Molecular Weight:	585.23
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Manzamine A hydrochloride is an orally active beta-carboline alkaloid that exhibits specific inhibitory effects on GSK-3 $\beta$ (IC <sub>50</sub> = 10.2 $\mu$ M) and CDK-5 (IC <sub>50</sub> = 1.5 $\mu$ M). Additionally, it targets vacuolar ATPases, leading to the inhibition of autophagy in pancreatic cancer cells. Manzamine A hydrochloride possesses antimalarial and anticancer properties, and also demonstrates potent activity against HSV-1[4].
Targets(IC50)	Others,Proton pump,CDK,Parasite,Autophagy,HSV,GSK-3
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 $\mu$ 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].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7087 mL	8.5436 mL	17.0873 mL
5 mM	0.3417 mL	1.7087 mL	3.4175 mL
10 mM	0.1709 mL	0.8544 mL	1.7087 mL
50 mM	0.0342 mL	0.1709 mL	0.3417 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

- Hamann M, 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;70(9):1397-1405.
- 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.
- Winkler JD, et al. Antimalarial activity of a new family of analogues of manzamine A. *Org Lett.* 2006;8(12):2591-2594.
- 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.

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