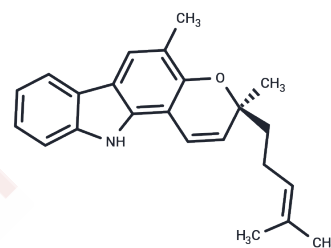


Mahanimbine

Chemical Properties

CAS No. :	21104-28-9
Formula:	C ₂₃ H ₂₅ NO
Molecular Weight:	331.45
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Mahanimbine is found in the roots, leaves and stems of <i>Murraya koenigii</i> and is an orally active alkaloid extracted from <i>Murraya koenigii</i> . Bifidobacterium bifidum leaves on histopathological changes in pancreatic beta cells of streptozotocin-induced diabetic rats.
Targets(IC50)	NF-κB, Cholinesterase (ChE)
In vitro	Mahanimbine induces cell cycle arrest at the G ₀ /G ₁ phase and apoptosis in Capan-2 and SW1190 cancer cells when used at a concentration of 7 μM, as well as inhibits proliferation in Capan-2, SW1190, BxPC-3, CFPAC-1, and HPAF-II cancer cells (IC ₅₀ s = 3.5, 3.5, 16, 64, and 32 μM, respectively).[2] It is active against <i>S. aureus</i> and <i>S. pyogenes</i> (MIC ₁₀₀ = 50 μg/ml for both), as well as <i>A. aegypti</i> fourth instar larvae when used at a concentration of 100 μg/ml.[3]
In vivo	Mahanimbine treatment improves glucose clearance and upregulates the expression of insulin-responsive genes in the liver and adipose tissue. Mahanimbine prevented HFD-induced hyperlipidemia and fat accumulation in adipose tissue and liver along with the restricted progression of systemic inflammation and oxidative stress. Mahanimbine (2-4 mg/kg ; p.o. ; daily for 12 weeks) prevents HFD-induced weight gain in mice (male and female).[1]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.017 mL	15.0852 mL	30.1705 mL
5 mM	0.6034 mL	3.017 mL	6.0341 mL
10 mM	0.3017 mL	1.5085 mL	3.017 mL
50 mM	0.0603 mL	0.3017 mL	0.6034 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

Jagtap S, et al. Effect of mahanimbine, an alkaloid from curry leaves, on high-fat diet-induced adiposity, insulin resistance, and inflammatory alterations. *Biofactors*. 2017 ; 43(2):220-231.

Pei C, et al. Mahanimbine Exerts Anticancer Effects on Human Pancreatic Cancer Cells by Triggering Cell Cycle Arrest, Apoptosis, and Modulation of AKT/Mammalian Target of Rapamycin (mTOR) and Signal Transducer and Activator of Transcription 3 (STAT3) Signalling Pathways. *Med Sci Monit*. 2018 ; 24:6975-6983.

Birari R, et al. Antiobesity and lipid lowering effects of *Murraya koenigii* (L.) Spreng leaves extracts and mahanimbine on high fat diet induced obese rats. *Fitoterapia*. 2010 ; 81(8):1129-1133.

Ramsewak RS, et al. Biologically active carbazole alkaloids from *Murraya koenigii*. *J Agric Food Chem*. 1999 ; 47(2): 444-447.

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