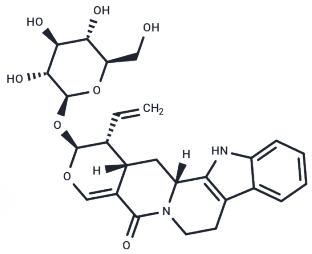
Data Sheet (Cat.No.TN2298)

TargetMol

Vincosamide

Chemical Properties



CAS No. : 23141-27-7

Formula: C26H30N2O8

Molecular Weight: 498.52

Storage: Store at low temperature,Keep away from moisture
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	Vincosamide is an alkaloid from Psychotria leiocarpa extract, inhibits the acetylcholinesterase (AChE) activity with anti-inflammatory activity. Vincosamide can effect relaxation of the supercoiled pBR322 plasmid DNA in the presence of Cu2+.
Targets(IC50)	Cholinesterase (ChE)
In vitro	the compound vincosamide (PL-1) was identified for the first time in methanolic extract of the Psychotria leiocarpa (ME-PL) leaves, as well as the anti-inflammatory and anticholinesteric effects in rodents and molecular docking simulations.?The fractionation of the chloroform fraction (CF-PL) through chromatographic methods afforded the known compound PL-1.?The anti-inflammatory activity of the ME-PL (30, 100, and 300 mg/kg) and PL-1 (3, 30, and 100 mg/kg) was analyzed using experimental models: paw edema, pleurisy, and mechanical and thermal hyperalgesia induced by carrageenan.?The anticholinesterase activity of the ME-PL (30 and 100 mg/kg) and PL-1 (30 mg/kg) was showed by acetylcholinesterase (AChE) inhibitory in brain structures.? The molecular docking simulations were performed using Molegro Virtual Docker v6.0.? Overall, the results indicated that ME-PL and PL-1 demonstrated an anti-edematogenic effect in Cg-induced paw edema, leukocyte migration in the pleurisy model, and significantly reduced mechanical hyperalgesia, cold response to acetone in mice.?The samples exhibited maximal inhibition of enzyme acetylcholinesterase (AChE) in the frontal cortex.?The molecular coupling of PL-1 with the AChE showed significant interactions with the catalytic and peripheral site, corroborating the activity presented in the inhibition assay.?The acute administration of ME-PL did not cause signs of toxicity in the treated animals.?The results showed that P. leiocarpa inhibited AChE and anti-inflammatory activity, and alkaloid vincosamide could be responsible, at least in part, for the observed effects, supporting the popular use of this genus.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0059 mL	10.0297 mL	20.0594 mL
5 mM	0.4012 mL	2.0059 mL	4.0119 mL
10 mM	0.2006 mL	1.003 mL	2.0059 mL
50 mM	0.0401 mL	0.2006 mL	0.4012 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

Formagio A S N , Volobuff C R F , Kassuya C A L , et al. Psychotria leiocarpa Extract and Vincosamide Reduce Chemically-Induced Inflammation in Mice and Inhibit the Acetylcholinesterase Activity[J]. Inflammation, 2019, 42 (5):1561-1574.