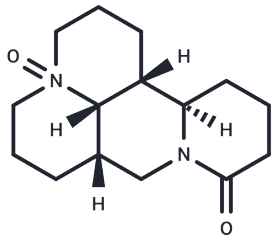
Data Sheet (Cat.No.T2754)

TargetMol

Oxymatrine

Chemical Properties



CAS No. : 16837-52-8

Formula: C15H24N2O2

Molecular Weight: 264.36

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	Oxymatrine (Oxysophoridine) is an alkaloid isolated from Sophora flavescens, used as the antibiotic. It is a traditional Chinese medicine used in the treatment against hepatitis B virus.It can also inhibit iNOS expression and TGF - β / Smad pathway.
Targets(IC50)	Apoptosis,Autophagy,Influenza Virus,TGF-beta/Smad
In vivo	LD50 in mouse: 521 mg/kg, i.p.
Kinase Assay	P450 Inhibition Studies: Pooled human liver microsomes (HLM) from at least 15 donors are used for all inhibition assays. For IC50 determinations, the substrate probes are used at their approximate in vitro Km values. All incubations are performed with 100 mM potassium phosphate buffer (pH 7.4) and 1 mM NADPH. For CYP1A2 inhibition study, incubations are performed in a total volume of 0.5 ml, in duplicates with 0.1 mg/ml HLM, 30 μM phenacetin, 1 mM NADPH, and in the presence of avasimibe (0, 0.3, 0.75, 1.5, 3, 7.5, 15, 30, and 40 μM in 50 mM) in a potassium phosphate buffer at pH 7.4. After preincubation at 37 °C for 7 min, NADPH is added to initiate the enzyme reaction. The reaction mixture is quenched with 500 μl of ice-cold 100 ng/ml paracetamol-D4/CH3CN after 25 min. The standards (4-acetamidophenol, singlet) and quality controls (triplicates for low, medium, and high) are prepared at room temperature. After mixing, 0.2 ml of the samples is transferred to another plate and submitted for LC/MS/MS analysis after centrifugation at 3000 rpm for 10 min. A Supelco Discovery Amide C16, 100 × 2.1 mm (5-μm particle size) column (Supelco, Bellefonte, PA) is used. The mobile phase is isocratic, 40:60 [acetonitrile/formic acid, 0.1% (v/v)] at 0.2 ml/min.
Cell Research	DU145, PC-3 and PNT1B cell lines (3×104 cells/well) are seeded into 96-well plates and incubated overnight at 37°C in 5% CO2. Subsequently, the cells are incubated with different concentrations of oxymatrine (0, 2, 4, 6 and 8 mg/mL). MTT (10 mL; 5 mg/mL) is added and the mixture is incubated in darkness at 37°C for 2 h. Absorbance is measured at a wavelength of 490 nm using a microplate reader[2].

Solubility Information

Solubility	DMSO: 125 mg/mL (472.84 mM),Sonication is recommended. H2O: 33.33 mg/mL (126.08 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (15.13 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7827 mL	18.9136 mL	37.8272 mL
5 mM	0.7565 mL	3.7827 mL	7.5654 mL
10 mM	0.3783 mL	1.8914 mL	3.7827 mL
50 mM	0.0757 mL	0.3783 mL	0.7565 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

Xiang X, et al. Chin Med J (Engl), 2002, 115(4), 593-596.
Mlicka A, Zielińska W, Mikołajczyk K, et al.Synergistic effect of oxymatrine and 5-fluorouracil on the migratory potential in A549 non-small cell lung cancer cells.Medical Research Journal.2022, 7(4): 293-300.
Wang X, Wang Y, Geng X, et al.Oxymatrine antagonises oxidative stress and apoptosis in Nemopilema nomurai toxin-induced cardiotoxicity by inhibiting mitogen-activated protein kinase.Toxicology Letters.2024
Chen XS, et al. World J Gastroenterol, 2001, 7(1), 49-52.