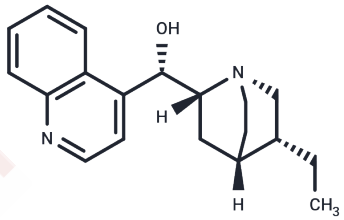
Data Sheet (Cat.No.T21156)

TargetMol

Hydrocinchonine

Chemical Properties



CAS No. : 485-65-4

Formula: C19H24N2O

Molecular Weight: 296.41

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	Hydrocinchonine is reported to have multidrug resistance reversal activity, which can weaken drug resistance by inhibiting the function of P-gp and possibly affecting its expression. In MES-SA/DX5 cells, the combination of Hydrocinchonine and Paclitaxel can enhance the apoptosis.
Targets(IC50)	Apoptosis,P-gp
In vitro	Hydrocinchonine (10 μM, 24) can enhance the cytotoxicity induced by taxol (TAX) in MES-SA (IC50 = 18.59nm)/DX5 (IC50 = 632.64nm) cells expressing P-gp, but has no obvious toxicity to both cell lines [1]. Hydrocinchonine (10 μM, 24 hours) can effectively restore the sensitivity of drug-resistant cancer cells to tax-induced apoptosis, resulting in a large number of deaths in MES-SA/DX5 cells [1]. Hydrocinchonine (10 μM, 1 hour) can effectively inhibit the function of P-gp and prevent it from pumping the substrate out of the cell, thus making the drug accumulate in MES-SA/DX5 cells [1].

Solubility Information

Solubility	Ethanol: 4 mg/mL (13.49 mM),Sonication is recommended. DMSO: Soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.3737 mL	16.8685 mL	33.7371 mL
5 mM	0.6747 mL	3.3737 mL	6.7474 mL
10 mM	0.3374 mL	1.6869 mL	3.3737 mL
50 mM	0.0675 mL	0.3374 mL	0.6747 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

Sang-Yun Lee, et al. Hydrocinchonine, cinchonine, and quinidine potentiate paclitaxel-induced cytotoxicity and apoptosis via multidrug resistance reversal in MES-SA/DX5 uterine sarcoma cells. Environ Toxicol. 2011 Aug;26(4):424-31.

Lee SY, Rhee YH, Jeong SJ, Lee HJ, Lee HJ, Jung MH, Kim SH, Lee EO, Ahn KS, Ahn KS, Kim SH. Hydrocinchonine, cinchonine, and quinidine potentiate paclitaxel-induced cytotoxicity and apoptosis via multidrug resistance reversal in MES-SA/DX5 uterine sarcoma cells. Environ Toxicol. 2011 Aug;26(4):424-31. doi: 10.1002/tox.20568. Epub 2010 Mar 1. PubMed PMID: 20196146.

KING H. Conversion of hydroquinidine into hydrocinchonine and of cupreine into cinchonidine. J Chem Soc. 1946 Jun;(6):523. PubMed PMID: 20280697.