# Data Sheet (Cat.No.T21156)

TargetMol

## Hydrocinchonine

### Chemical Properties

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|---|---|
| CAS No. : | 485-65-4 |
| Formula: | C19H24N2O |
| Molecular Weight: | 296.407 |
| Storage: | Powder: -20°C for 3 years \| In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |

### Biological Description

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| 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].<br>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].<br>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

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| Solubility | Ethanol: 4.00 mg/mL (13.49 mM),Sonication is recommended.<br>DMSO: Soluble,<br>(< 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.