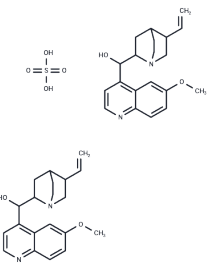
Data Sheet (Cat.No.T61517)

TargetMol

Quinidine Monosulfate

Chemical Properties



CAS No. : 50-54-4

Formula: C40H50N4O8S

Molecular Weight: 746.92

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	Quinidine Monosulfate is an antiarrhythmic agent and a potent, orally active, selective cytochrome P450db inhibitor. Additionally, it functions as a K+ channel blocker with an IC50 of 19.9 μM, and can be used for malaria research [1] [2] [3].
Targets(IC50)	Apoptosis,Others,Parasite,Cytochromes P450,Potassium Channel
In vitro	Quinidine is an anti-arrythmic drug which affects ionic currents in heart muscle and which has also been shown to be a potent blocker of several classes of K + channel in a variety of cell types [1]. Bath application of quinidine causes a dose-dependent reduction of the peak amplitude of I k. The K d for blockade of I k at 0 mV is estimated to be 41 μM [1]. Quinidine elicits a dose-dependent increase of the rate of the decay of I k and this effect is enhanced by membrane depolarization. Quinidine also causes a 5 mV hyperpolarizing shift of the steady-state inactivation curve and increases the half-time for recovery from inactivation. Quinidine does not affect the onset of inactivation measured at -30 mV [1].
In vivo	Quinidine sulfate is rapidly absorbed, with peak plasma concentrations 60-90 min after an oral dose. Other salts (gluconate, polygalacturonate) are more slowly absorbed, with lower peak concentrations [2]. Quinidine is approximately 70-90 % bound to plasma proteins. It undergoes hepatic oxidative metabolism to form an N-oxide, a 3-hydroxy form, an O-demethyl form and 2'-quinidinone. Over one-half of patients starting quinidine stop within the first year of therapy because of side effects. These include, commonly, diarrhea, nausea, and vomiting which are not necessarily related to high plasma concentrations [2]. Quinidine inhibits metabolism of amphetamine in rats. Quinidine pretreatment results in a significant decrease in the excretion of p-hydroxyamphetamine at 24 and 48 h to 7.2 and 24.1% of the vehicle-control levels, respectively, accompanied by a significant increase in amphetamine excretion between 24 and 48 h to 542% of the control [3].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3388 mL	6.6942 mL	13.3883 mL
5 mM	0.2678 mL	1.3388 mL	2.6777 mL
10 mM	0.1339 mL	0.6694 mL	1.3388 mL
50 mM	0.0268 mL	0.1339 mL	0.2678 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.