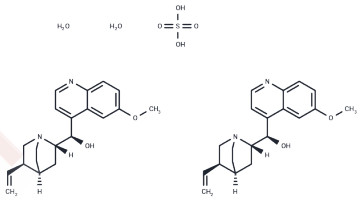
Data Sheet (Cat.No.TN4883)

TargetMol

Quinine sulfate dihydrate

Chemical Properties



CAS No. : 6119-70-6

Formula: C40H58N4O12S

Molecular Weight: 818.97

Storage: Keep away from direct sunlight
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	Quinine sulfate dihydrate plays a major role in potassium channel blockers. It is also used as an antimalarial, anticholinergic, antihypertensive and a hypoglycemic agent. It inhibits mitochondrial ATP-regulated potassium channel. It is also used to study the metabolism of biocrystalized heme, hemozoin, in malarial parasites and to study the toxicity of heme (FP)-complexes.
Targets(IC50)	Anti-infection,Others,Parasite,Potassium Channel
In vitro	Quinine is an alkaloid antimalarial agent that has MIC values ranging from 10 to 500 nM for 60 Thai isolates of P. falciparum. It inhibits hemozoin formation in purified trophozoites, leading to an increase in free heme, similar to the mechanism of action of chloroquine[1].
In vivo	In mice, quinine reduces P. berghei parasite load in the blood with a minimum effective dose (MED) of 150 mg/kg [2].

Solubility Information

Solubility	DMSO: 8.19 mg/mL (10 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.221 mL	6.1052 mL	12.2105 mL
5 mM	0.2442 mL	1.221 mL	2.4421 mL
10 mM	0.1221 mL	0.6105 mL	1.221 mL
50 mM	0.0244 mL	0.1221 mL	0.2442 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

Thaithong S, et al. Susceptibility of Plasmodium falciparum to five drugs: an in vitro study of isolates mainly from Thailand. Trans R Soc Trop Med Hyg. 1983;77(2):228-31.
THURSTON JP. The action of antimalarial drugs in mice infected with Plasmodium berghei. Br J Pharmacol Chemother. 1950 Sep;5(3):409-16.