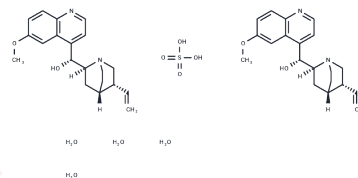


## Quinine sulfate dihydrate

## Chemical Properties

|                   |                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------|
| CAS No. :         | 6119-70-6                                                                                  |
| Formula:          | C <sub>40</sub> H <sub>58</sub> N <sub>4</sub> O <sub>12</sub> S                           |
| Molecular Weight: | 818.97                                                                                     |
| Appearance:       | no data available                                                                          |
| Storage:          | keep away from direct sunlight<br>Powder: -20°C for 3 years   In solvent: -80°C for 1 year |



## 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 biocrystallized heme, hemozoin, in malarial parasites and to study the toxicity of heme (FP)-complexes. |
| Targets(IC50) | Others                                                                                                                                                                                                                                                                                                                                                                                    |
| In vitro      | Quinine is an alkaloid antimalarial agent that has MIC values ranging from 10 to 500 nM for 60 Thai isolates of <i>P. falciparum</i> . 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 <i>P. berghei</i> 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)<br>(< 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.

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.

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