

Product Name: Chloroquine diphosphate

Catalog No.: 4109

Batch No.: 3

CAS Number: 50-63-5

EC Number: 200-055-2

IUPAC Name: *N*^d-(7-Chloro-4-quinolinyl)-*N*¹,*N*¹-dimethyl-1,4-pentanediamine diphosphate salt

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₂₆ClN₃·2H₃PO₄.

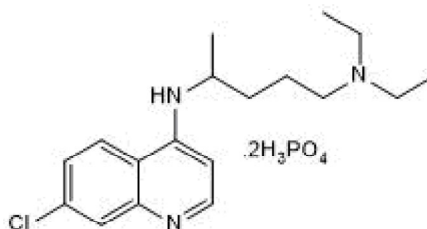
Batch Molecular Weight: 515.86

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Desiccate at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon Hydrogen Nitrogen		
Theoretical	41.91	6.25	8.15
Found	41.66	6.36	8.12

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Chloroquine diphosphate is an antimalarial (Plasmodium) medicine. Inhibits cell growth and induces cell death in numerous cancer cell lines; inhibits cell proliferation and viability and induces apoptosis in 4T1 mouse breast cancer cells in vitro. Exhibits antimetastatic activity. Also inhibits autophagy via a mechanism distinct from that of 3-methyladenine (Cat. No. 3977). Blocks receptor-mediated endocytosis of mannose-glycoconjugates by macrophages. Inhibits SARS-CoV-2 infection in vitro (EC₅₀ = 1.13 μM). Chloroquine improves efficacy of adeno-associated viral gene transduction in vivo and in vitro, as well as enhancing non-viral gene... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

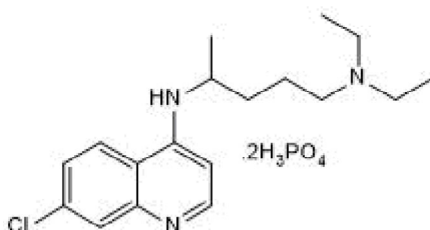
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Batch Molecular Weight: 515.86

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



References:

McErlean et al (2021) Rational design and characterisation of a linear cell penetrating peptide for non-viral gene delivery. *J.Control.Release* **330** 1288. PMID: 33227336.

Wang et al (2020) Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) *in vitro*. *Cell Research* **30**.

Chandler et al (2019) Enhancement of adeno-associated virus-mediated gene therapy using hydroxychloroquine in murine and human tissues. *Mol.Ther.Methods Clin.Dev.* **14** 77. PMID: 31309129.

Storage: Desiccate at RT

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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