

**Product Name:** Chloroquine diphosphate

**Catalog No.:** 4109

**Batch No.:** 3

CAS Number: 50-63-5

EC Number: 200-055-2

IUPAC Name: *N*<sup>4</sup>-(7-Chloro-4-quinolinyl)-*N*<sup>1</sup>,*N*<sup>1</sup>-dimethyl-1,4-pentanediamine diphosphate salt

## 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>18</sub>H<sub>26</sub>ClN<sub>3</sub>·2H<sub>3</sub>PO<sub>4</sub>.

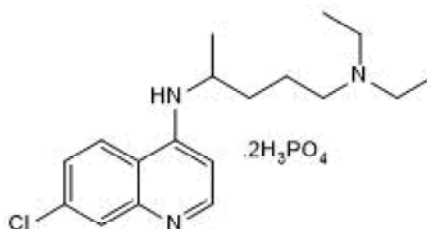
**Batch Molecular Weight:** 515.86

**Physical Appearance:** White solid

**Solubility:** water to 100 mM

**Storage:** Desiccate at RT

**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.7% purity

**<sup>1</sup>H 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

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**Description:**

Chloroquine diphosphate is an antimalarial drug. 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 (EC<sub>50</sub> = 1.13 μM). Chloroquine improves efficacy of adeno-associated viral gene transduction in vivo and in vitro, as well as enhancing non-viral gene transfection in ... Please see product specific page on www.tocris.com for full description.

**Physical and Chemical Properties:**

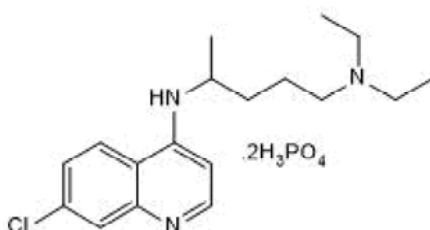
Batch Molecular Formula: C<sub>18</sub>H<sub>26</sub>ClN<sub>3</sub>·2H<sub>3</sub>PO<sub>4</sub>.

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. Our standard recommendations are:

**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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