

Certificate of Analysis

www.tocris.com

Product Name: Hydroxychloroquine sulfate

Catalog No.: 5648

Batch No.: 2

CAS Number: 747-36-4

IUPAC Name: 2-[[4-[(7-Chloro-4-quinolinyl)amino]pentyl]ethylamino]ethanol sulfate

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₈H₂₈ClN₃O₅S

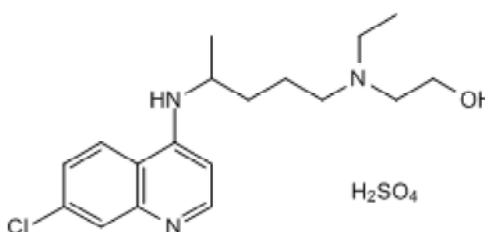
Batch Molecular Weight: 433.95

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	49.82	6.5	9.68
Found	49.55	6.51	9.74

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

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Description:

Hydroxychloroquine sulfate is an autophagy inhibitor. Also inhibits TLR9. Inhibits growth and induces apoptosis of renal cancer cells *in vitro*. Additionally inhibits PRC2 by inhibiting the allosteric binding of PRC2 to EED (embryonic ectoderm development) within the H3K27me3-binding pocket, and reduces H3K27me3 levels in multiple myeloma cells *in vitro*. Inhibits SARS-CoV-2 viral infection, *in vitro* (EC₅₀ values in μM range and dependent on viral RNA copy number). Hydroxychloroquine improves efficacy of adeno-associated viral gene transduction *in vivo* and *in vitro*. Also antimalarial and immunomodulator. Tocris products are for biomedic... Please see product specific page on www.tocris.com for full description.

Physical and Chemical Properties:

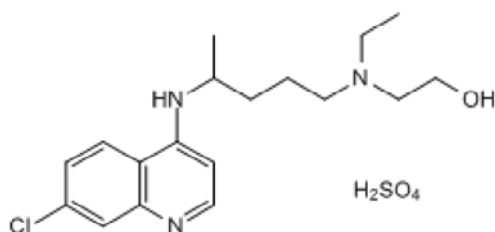
Batch Molecular Formula: C₁₈H₂₈ClN₃O₅S

Batch Molecular Weight: 433.95

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

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.

References:

Liu *et al* (2020) Hydroxychloroquine, a less toxic derivative of chloroquine, is effective in inhibiting SARS-CoV-2 infection *in vitro*. *Cell Discovery* **6** 16. PMID: 32194981 .

Catalano *et al* (2019) A drug repurposing screening reveals a novel epigenetic activity of hydroxychloroquine. *Eur.J.Med.Chem.* **183**. PMID: 31550663.

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.

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