

Certificate of Analysis

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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

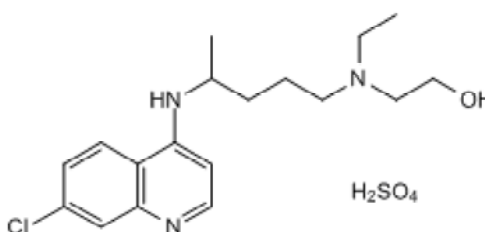
Batch Molecular Weight: 433.95

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:

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). Also antimalarial and immunomodulator. Tocris products are for biomedical research use only. They are not intended for human or veterinary use.

Physical and Chemical Properties:

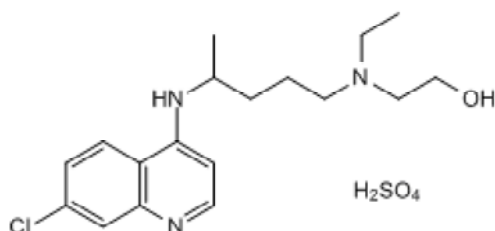
Batch Molecular Formula: C₁₈H₂₈ClN₃O₅S

Batch Molecular Weight: 433.95

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



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.

Lee *et al* (2015) Hydroxychloroquine Destabilizes Phospho-S6 in Human Renal Carcinoma Cells. *PLoS ONE* **10** e0131464. PMID: 26134285.

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.

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