

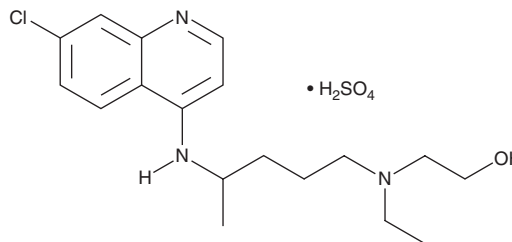
PRODUCT INFORMATION



Hydroxychloroquine (sulfate)

Item No. 17911

CAS Registry No.: 747-36-4
Formal Name: 2-[[4-[(7-chloro-4-quinolinyl)amino]pentyl]ethylamino]-ethanol, monosulfate
Synonyms: HCQ, NSC 4375
MF: C₁₈H₂₆ClN₃O • H₂SO₄
FW: 434.0
Purity: ≥95%
UV/Vis.: λ_{max}: 221, 236, 256, 329, 343 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Hydroxychloroquine (sulfate) is supplied as a crystalline solid. Hydroxychloroquine (sulfate) is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of hydroxychloroquine (sulfate) be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of hydroxychloroquine (sulfate) in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Hydroxychloroquine is an aminoquinoline with antimalarial, anti-inflammatory, and antiviral activities.¹⁻⁴ It is active against the chloroquine-sensitive NF54 and D6 strains of *P. falciparum* (IC₅₀s = 16.3 and 15 nM, respectively) but has decreased activity against chloroquine-resistant *P. falciparum* strains (IC₅₀s = 422.7-1,735.3 nM).¹ Hydroxychloroquine inhibits production of IL-22, IL-17A, and IL-6 induced by phorbol 12-myristate 13-acetate (TPA; Item No. 10008014) and ionomycin (Item No. 10004974) in peripheral blood mononuclear cells (PBMCs) isolated from healthy individuals or patients with systemic lupus erythematosus (SLE) or rheumatoid arthritis (RA).³ It inhibits accumulation of sequestosome-1 (SQSTM1) puncta, a marker of autophagy, in mouse embryonic fibroblasts (MEFs) in a concentration-dependent manner.² Hydroxychloroquine reduces viral titers of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in the culture supernatant of infected Vero E6 cells but does not reduce SARS-CoV-2 viral titers in an *in vitro* human airway epithelium model or the respiratory tract of infected cynomolgus macaques.⁴ Formulations containing hydroxychloroquine have been used in the prevention or treatment of malaria, as well as in the treatment of RA and SLE.

References

1. Delves, M., Plouffe, D., Scheurer, C., et al. *PLoS Med.* **9**(2), e1001169 (2012).
2. Mauthe, M., Orhon, I., Rocchi, C., et al. *Autophagy* **14**(8), 1435-1455 (2018).
3. da Silva, J.C., Mariz, H.A., da Rocha, L.F., Jr., et al. *Clinics (Sao Paulo)* **68**(6), 766-771 (2013).
4. Maisonnasse, P., Guedj, J., Contreras, V., et al. *Nature* **585**(7826), 584-587 (2020).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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