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DATASHEET

Mefloquine hydrochloride

Product overview

Name Mefloquine hydrochloride

Cat No HB9555
Biological action Blocker
Purity >98%

Description Cx36 and Cx50 gap channel blocker. Antimalarial, antischistosomal and antiviral.

Biological Data

Biological description

Cx36 and Cx50 gap channel blocker (IC $_{50}$ values are 0.3 and 1.1 μ M, respectively). Other gap junctions (e.g. Cx43, Cx32, and Cx26) are only affected at concentrations 10-100 fold higher. In neocortical slices, mefloquine blocks gap junctional coupling between interneurons with minimal nonspecific actions.

Also shows antimalarial action. Inhibits the 80S ribosome of *Plasmodium falciparum* to block protein synthesis.

Additionally shows antischistosomal and antiviral actions and has recently been investigated as part of COVID-19 compound repurposing.

Solubility & Handling

Solubility overview Storage instructions Storage of solutions

Shipping Conditions

Important

Soluble in DMSO (50 mM), and in ethanol (100 mM)

+4°C

Prepare and use solutions on the same day if possible. Store solutions at -20°C for up to one month if storage is required. Equilibrate to RT and ensure the solution is precipitate free before use.

Stable for ambient temperature shipping. Follow storage instructions on receipt.

This product is for RESEARCH USE ONLY and is not intended for therapeutic or diagnostic use. Not

for human or veterinary use

Chemical Data

Chemical name Molecular Weight Chemical structure (S)-[2,8-bis(trifluoromethyl)quinolin-4-yl]-[(2R)-piperidin-2-yl]methanol;hydrochloride

CF₃ N CF₃

65329

Molecular Formula $C_{17}H_{16}F_6N_2O \cdot HCI$ CAS Number51773-92-3

PubChem identifier SMILES InChi

C1CCNC(C1)C(C2=CC(=NC3=C2C=CC=C3C(F)(F)F)C(F)(F)F)O.CI

InChI=1S/C17H16F6N2O.CIH/c18-16(19,20)11-5-3-4-9-10(15(26)12-6-1-2-7-24-12)8-13(17(21,22)2

InChiKey MDL number 3)25-14(9)11;/h3-5,8,12,15,24,26H,1-2,6-7H2;1H/t12-,15+;/m1./s1 WESWYMRNZNDGBX-YLCXCWDSSA-N

MFCD00797519

References

Identification of Antiviral Drug Candidates against SARS-CoV-2 from FDA-Approved Drugs

Jeon S et al (2020) Antimicrob Agents Chemother 64

PubMedID 32366720

Potent block of Cx36 and Cx50 gap junction channels by mefloquine

Cruikshank SJ et al (2004) Proc Natl Acad Sci U S A 101(33)

PubMedID 15297615

Mefloquine targets the Plasmodium falciparum 80S ribosome to inhibit protein synthesis

Wong W et al (2017) Nat Microbiol 2

PubMedID 28288098