Product Data Sheet

Chemical Properties

Product Name: Naphthoquine phosphate

Cas No.: 173531-58-3
M.Wt: 605.94
Formula: C24H34ClN3O9P2

Chemical Name: 2-[(tert-butylamino)methyl]-4-[(7-chloroquinolin-4-yl)amino]-5,6,7,8-tetrahydronaphthalen-1-ol; phosphoric acid

Canonical SMILES: CC(C)(C)NCC1=CC(=C2CCCCC2=C1O)NC3=C4C=CC(=CC4=NC=C3)Cl.OP(=O)(O)O.OP(=O)(O)O

Solubility: Soluble in DMSO

Storage: Store at -20°C

General tips: For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shopping Condition: Evaluation sample solution: ship with blue ice
All other available size: ship with RT, or blue ice upon request

Biological Activity

Targets: Microbiology & Virology
Pathways: Antimalaria

Description:

IC50: 0.1-5.2 nM for various P. falciparum strains [1]
Malaria remains a disease of devastating global impact, killing more than 800,000 people every year—the vast majority being children under the age of 5. Naphthoquine phosphate is an antimalarial drug developed in China.

In vitro: Naphthoquine phosphate showed promising antimalaria activities against various P.
falciparum strains. Moreover, previous study highlighted that naphthoquine did not lose potency when tested against chloroquine resistant strains [1].

In vivo: In an study aiming to investigate the antimalarial activity of naphthoquine phosphate combined with artemisinine against Plasmodium knowlesi in rhesus monkey, it was found that the combination of naphthoquine phosphate and artemisinine was superior to the single component and the optimum proportion in the combination is 1 : 2.5 in treating P. knowlesi infection in monkeys [2].

Clinical trial: An oral single dose of the combination drug (400 mg of naphthoquine + 1000mg artemisinin) was administered to adult uncomplicated falciparum malaria patients. Mean fever clearance time, parasite clearance time were 18.2 ± 8.6 h and 34.6 ± 14.3 h, respectively. Adequate clinical and parasitological response was achieved in 52 out of 54 cases, the rate being 98.1%. The drug was well tolerated and no adverse reactions were detected in the patients [3].

Reference:

Caution
FOR RESEARCH PURPOSES ONLY.
NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most ApexBio products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.