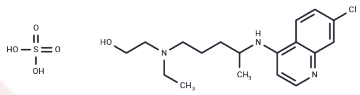
Data Sheet (Cat.No.T0951)

TargetMol

Hydroxychloroquine sulfate

Chemical Properties



CAS No. : 747-36-4

Formula: C18H26ClN3O·H2SO4

Molecular Weight: 433.95

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Hydroxychloroquine sulfate (Acidum iopanoicum) inhibits plasmodial heme polymerase. It is a chemotherapeutic agent that acts against erythrocytic forms of malarial parasites. Hydroxychloroquine appears to concentrate in food vacuoles of affected protozoa.
Targets(IC50)	Parasite,Autophagy,DNA,SARS-CoV,TLR
In vitro	Hydroxychloroquine Sulfate is a potent inhibitor of autophagy. It prevents lysosomal acidification, thereby interfering with a key step in the autophagic process.HCQ treatment inhibits RCC (renal cell cancer) cell growth, promotes apoptosis, inhibits mitochondrial oxygen consumption, and increases rates of glycolysis[2].
In vivo	The treatment of Hydroxychloroquine Sulfate reduces the infarct size in an in vivo rat model of I/R injury and the cardioprotective effect of Hydroxychloroquine is ERK1/2 dependent[3]. In addition, Hydroxychloroquine Sulfate shows an early vascular protective effect. HCQ seems to prevent the occurrence of endothelial dysfunction(ED) in treated animals[4].
Kinase Assay	In vitro kinase assays: with purified proteins, recombinant S6 protein and recombinant active P70S6K are incubated in 1x kinase buffer with various amount of HCQ or RAD001 in the presence (25 μM) or absence of ATP for 30 minutes at 30°C. Total and phosphorylated S6 at ser235/236 and ser240/244 are detected by western analysis using phosphospecific antibodies. Note that recombinant GST-tagged S6 (53 kd) is distinguished from endogenous S6 (32 kd) on the western blot.
Cell Research	All cells are cultured in RPMI with 10% FBS, 1% glutamine, and 1% Pen/Strep. cells are seeded on the appropriated plates overnight and treated with HCQ (75 or 100 μM) for 48 hours.(Only for Reference)

Solubility Information

Solubility	DMSO: Insoluble H2O: 10 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3044 mL	11.5221 mL	23.0441 mL
5 mM	0.4609 mL	2.3044 mL	4.6088 mL
10 mM	0.2304 mL	1.1522 mL	2.3044 mL
50 mM	0.0461 mL	0.2304 mL	0.4609 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

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Xia Z, Zhang X, Liu P, et al. GNA13 regulates BCL2 expression and the sensitivity of GCB-DLBCL cells to BCL2 inhibitors in a palmitoylation-dependent manner. Cell Death & Disease. 2021, 12(1): 1-11.
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Lamphier M, et al. Mol Pharmacol. 2014, 85(3):429-440.
Manzo C, et al. Psychomotor Agitation Following Treatment with Hydroxychloroquine. Drug Saf Case Rep. 2017 Dec;4(1):6.
Xia Z, Zhang X, Liu P, et al. GNA13 regulates BCL2 expression and the sensitivity of GCB-DLBCL cells to BCL2 inhibitors in a palmitoylation-dependent manner[J]. Cell Death & Disease. 2021, 12(1): 1-11.