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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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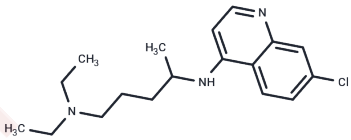
Data Sheet (Cat.No.T8689)

TargetMol

Chloroquine

Chemical Properties



CAS No. : 54-05-7

Formula: C18H26ClN3

Molecular Weight: 319.87

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Chloroquine is a Toll-like receptor inhibitor that inhibits autophagy. Chloroquine has anti-malarial and anti-inflammatory activity and is widely used in the treatment of malaria and rheumatoid arthritis. Chloroquine also has anti-SARS-CoV-2 (COVID-19) activity and anti-HIV-1 activity.
Targets(IC50)	SARS-CoV,TLR,HIV Protease,Antibiotic,Parasite,Autophagy
In vitro	**METHODS**: Human cholangiocarcinoma cells QBC939 were treated with Chloroquine (1.2-200 μM) for 24 h. Cell growth inhibition was detected by MTT. **RESULTS**: Chloroquine dose-dependently inhibited the cell growth of HRECs with an IC50 of 53.01 μM. [1] **METHODS**: Human non-small cell lung cancer cells A549 were treated with Chloroquine (10-80 μM) for 24 h. The expression levels of target proteins were detected by Western Blot. **RESULTS**: Chloroquine induced an increase in LC3-II expression and a decrease in LC3-I expression, resulting in an increase in the LC3-II/LC3-I ratio. The highest LC3-II/LC3-I ratio was observed with 40 μM Chloroquine treatment. [2] **METHODS**: Human osteosarcoma cells U2OS and human cervical cancer cells HeLa were treated with Chloroquine (100 μM) for 5 h. LAMP1, a marker protein for late endosomal compartment and lysosome, was detected by Immunofluorescence. **RESULTS**: Chloroquine increased the area of LAMP1 positive structures. [3]
In vivo	**METHODS**: To investigate the effects of Chloroquine on acute liver injury and its potential molecular mechanisms, a single dose of Chloroquine (5-50 mg/kg) was administered intraperitoneally to C57BL/6 mice 2-24 h before CCl4 (10 mL/kg) injection. **RESULTS**: Chloroquine pretreatment significantly inhibited CCl4-induced acute liver injury, as evidenced by a decrease in serum aminotransferases, aspartate aminotransferase, and a decrease in the histological score of liver injury, and down-regulated CCl4-induced high-mobility histone 1 (HMGB1) expression in liver tissues as well as the levels of serum HMGB1, IL-6, and TNF-α. levels. [4] **METHODS**: To investigate the relationship between Chloroquine and retinopathy, Chloroquine (50 mg/kg) was administered intraperitoneally to C57/BL6 mice three times a week for six weeks. **RESULTS**: Chronic administration of Chloroquine induced retinopathy in mice. mRNAs for IL-1β mRNA, a component of inflammatory vesicles, and caspase1 were increased in the retinas of Chloroquine-treated mice, consistent with the initiation of inflammatory vesicles, and NTPDase1 was increased, suggesting an increase in extracellular ATP in

	the retina. [5]

Solubility Information

Solubility	DMSO: 45 mg/mL (140.68 mM), Ethanol: 100 mg/mL (312.63 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1263 mL	15.6314 mL	31.2627 mL
5 mM	0.6253 mL	3.1263 mL	6.2525 mL
10 mM	0.3126 mL	1.5631 mL	3.1263 mL
50 mM	0.0625 mL	0.3126 mL	0.6253 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.

Reference

Jia B, et al. Autophagy inhibitor chloroquine induces apoptosis of cholangiocarcinoma cells via endoplasmic reticulum stress. Oncol Lett. 2018 Sep;16(3):3509-3516.
Yan C, Zheng L, Jiang S, et al.Exhaustion-associated