**Proteins** 

## **Product** Data Sheet

## Chloroquine-d<sub>4</sub> phosphate

**Cat. No.:** HY-17589S1

Molecular Weight: 519.89

Target: Toll-like Receptor (TLR); Autophagy; HIV; SARS-CoV; Parasite; Antibiotic; Isotope-

Labeled Compounds

Pathway: Immunology/Inflammation; Autophagy; Anti-infection; Others

Storage: Please store the product under the recommended conditions in the Certificate of

Analysis.

## **BIOLOGICAL ACTIVITY**

Description	Chloroquine- $d_4$ (phosphate) is the deuterium labeled Chloroquine phosphate. Chloroquine phosphate is an antimalarial and anti-inflammatory agent widely used to treat malaria and rheumatoid arthritis. Chloroquine phosphate is an autophagy and toll-like receptors (TLRs) inhibitor. Chloroquine phosphate is highly effective in the control of SARS-CoV-2 (COVID-19) infection in vitro (EC50=1.13 $\mu$ M)[1][2][3][4].
IC <sub>50</sub> & Target	Plasmodium
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs <sup>[1]</sup> .  MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## **REFERENCES**

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- [3]. Tuomela J, et al. Chloroquine has tumor-inhibitory and tumor-promoting effects in triple-negative breast cancer. Oncol Lett. 2013 Dec;6(6):1665-1672.
- [4]. Mohamed FE, et al. Effect of toll-like receptor 7 and 9 targeted therapy to prevent the development of hepatocellular carcinoma. Liver Int. 2014 Jul 2. doi: 10.1111/liv.12626.
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- [7]. Savarino A, et al. The anti-HIV-1 activity of chloroquine. J Clin Virol. 2001;20(3):131-135.

 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$ 

Tel: 609-228-6898 Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA

Page 2 of 2 www.MedChemExpress.com