



Chloroquine Phosphate

Data Sheet

Catalog Number:	MC11111	Product Type:	Small Molecule
Bio-Activity:	Autophagy inhibitor	CAS #:	50-63-5
Research Categories:	Cancer, stem cells, cell death, immunology, cancer, parasites, inflammation, infectious disease	Chemical Name:	N4-(7-Chloro-4-quinolinyl)-N1,N1-dimethyl-1,4-pentanediamine, diphosphate
Solubility:	Soluble in Water (up to 25 mg/ml).	Molecular Formula:	C18H26CIN3 · 2H3PO4
Purity:	> 98%	Molecular Weight:	515.87
Format:	Powder	Ship Temp:	Ambient
Storage:	Room Temperature		

Application Notes

Description/Data:

Antimalarial drug. Inhibits autophagy in a variety of cell lines [1]. Induces cell death in breast cancer cell lines and displays antitumor and antimetastatic activity in mouse models of breast cancer [2]. Eliminates cancer stem cells via deregulation of Jak2 and DNMT1 [3]. Displays synergy when combined with the Raf inhibitor, vemurafenib, in brain tumor [4]. Cell permeable and active in vivo.

References:

- 1) Frieboes et al. (2014), chloroquine-mediated cell death in metastatic pancreatic adenocarcinoma through inhibition of autophagy; *JOP*, 15 189
- 2) Jiang et al. (2010), Antitumor and antimetastatic activities of chloroquine diphosphate in a murine model of breast cancer; *Biomed. Pharmacother.*, 64 609
- 3) Choi et al. (2014), Chloroquine eliminates cancer stem cells through deregulation of Jak2 and DNMT1; *Stem Cells*, 32 2309.
- 4) Mulcahy Levy et al. (2014), Autophagy inhibition improves chemosensitivity in BRAFV600E brain tumors; *Cancer Discov.*, 4 773

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