

NEUROMICS



Chloroquine Phosphate

Data Sheet

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|-----------------------------|---|---------------------------|--|
| 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: | C ₁₈ H ₂₆ ClN ₃ · 2H ₃ PO ₄ |
| 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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