Product Data Sheet

# Pyronaridine Tetraphosphate

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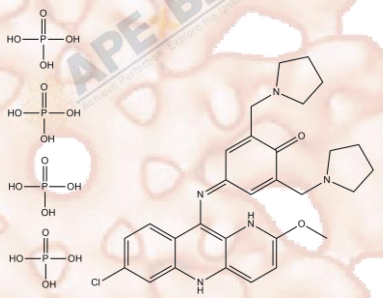
| **Cat. No.:** | A1931 |
| **CAS No.:** | 76748-86-2 |
| **Formula:** | C29H32ClN5O24H3PO4 |
| **M.Wt:** | 910.03 |
| **Synonyms:** | Malaridine |
| **Target:** | Others |
| **Pathway:** | MDR multidrug resistance |
| **Storage:** | Store at RT |



## Solvent & Solubility

insoluble in EtOH; ⩾12.25 mg/mL in DMSO with gentle warming; ⩾8.7 mg/mL in H2O

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1mg | 5mg | 10mg |
|---|---|---|---|---|
| In Vitro | **1 mM** | 1.0989 mL | 5.4943 mL | 10.9886 mL |
| | **5 mM** | 0.2198 mL | 1.0989 mL | 2.1977 mL |
| | **10 mM** | 0.1099 mL | 0.5494 mL | 1.0989 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

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| Shortsummary | Antimalarial agent |
| $IC_{50}$ & Target | |

In Vitro

**Cell Viability Assay**

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| Cell Line: | K562/A02 and MCF-7/ADR cells |
| Preparation method: | The solubility of this compound in DMSO is > 12.25 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months. |
| Reacting conditions: | 0 ~ 4.4 μM; 72 hrs |

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| | Applications: | Pyronaridine Tetraphosphate significantly enhanced the effect of DOX on K562/A02 and MCF-7/ADR cells, without affecting the effect of DOX on parent K562 and MCF-7 cells. At a concentration of 4.4 μM, Pyronaridine Tetraphosphate resulted in a ~ 295-fold and a 30-fold DOX sensitization in K562/A02 and MCF-7/ADR cells, respectively. |
| In Vivo | **Animal experiment** | |
| | Animal models: | Nude mice bearing K562 and K562/A02 tumors |
| | Dosage form: | 40 mg/kg; i.p.; q3d |
| | Applications: | Pyronaridine Tetraphosphate in combination with 4 mg/kg DOX exhibited no effect on the antitumor effect of DOX on K562 tumors, but significantly enhanced the antitumor effect of DOX on K562/A02 tumors. When DOX given at sub-MTD doses (1 or 2 mg/kg), the addition of Pyronaridine Tetraphosphate dose-dependently inhibited the growth of K562 tumors, but showed the minimal effect on K562/A02 tumors. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations

1. Villanueva PJ, Martinez A, et al. "Pyronaridine exerts potent cytotoxicity on human breast and hematological cancer cells through induction of apoptosis."a PLoS One. 2018 Nov 5;13(11):e0206467.PMID:30395606

**See more customer validations on www.apexbt.com.**

## References

[1]. Qi J, Wang S, Liu G, Peng H, Wang J, Zhu Z, Yang C. Pyronaridine, a novel modulator of P-glycoprotein-mediated multidrug resistance in tumor cells in vitro and in vivo. Biochem Biophys Res Commun. 2004 Jul 9;319(4):1124-31.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

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