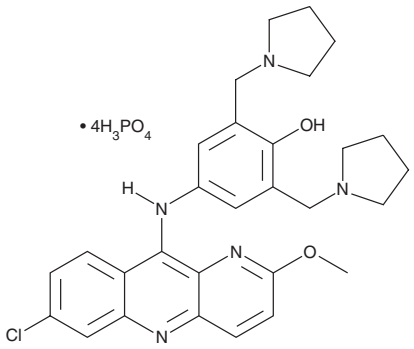
PRODUCT INFORMATION

Pyronaridine (phosphate)

Item No. 16139

CAS Registry No.:	76748-86-2
Formal Name:	4-[(7-chloro-2-methoxybenzo[b]-1,5-naphthyridin-10-yl)amino]-2,6-*bis*(1-pyrrolidinylmethyl)-phenol, tetraphosphate
Synonym:	PND
MF:	$C_{29}H_{32}ClN_5O_2 \bullet 4H_3PO_4$
FW:	910.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 239, 278, 359, 425 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pyronaridine (phosphate) is supplied as a crystalline solid. Aqueous solutions of pyronaridine (phosphate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of pyronaridine (phosphate) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Pyronaridine is an antimalarial agent.[1] It is active against six *P. falciparum* drug-sensitive or -resistant strains (IC_{50}s = 1.53-3.94 nM). Pyronaridine (3, 6, and 8 mg/kg) in combination with artesunate (Item No. 11817) reduces parasitemia in *P. chabaudi*-infected mice. It inhibits the replication of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in infected A459 cells overexpressing angiotensin-converting enzyme 2 (ACE2; IC_{50} = 198 nM).[2] Pyronaridine is also cytotoxic against a panel of human cancer cells lines, including breast, ovarian, and lung cancer cells, with 50% cytotoxic concentration values (CC_{50}s) ranging from 1.6 to 9.4 µM.[3] Formulations containing pyronaridine have been used in the treatment of malaria.

References

1. Vivas, L., Rattray, L., Stewart, L., *et al.* Anti-malarial efficacy of pyronaridine and artesunate in combination *in vitro* and *in vivo*. *Acta Trop.* **105(3)**, 222-228 (2008).
2. Puhl, A.C., Fritch, E.J., Lane, T.R., *et al.* Repurposing the ebola and marburg virus inhibitors tilorone, quinacrine, and pyronaridine: *In vitro* activity against SARS-CoV-2 and potential mechanisms. *ACS Omega* **6(11)**, 7454-7468 (2021).
3. Villanueva, P.J., Martinez, A., Baca, S.T., *et al.* Pyronaridine exerts potent cytotoxicity on human breast and hematological cancer cells through induction of apoptosis. *PLoS One* **13(11)**, e0206467 (2018).

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