Quinacrine is an antiprotozoan drug used for malaria and giardiasis and has recently been investigated in treating lupus, as an anticancer agent, inflammation, and as a female sterilization agent.\(^1\) It has been found to have synergistic effects with vorinostat in the treatment of T-cell acute lymphoblastic leukemia via mitophagy blockage and an increase in ROS.\(^2\) Quinacrine displayed antitumor effects an intestinal cancer mouse model and HCT116 p53\(^{-/-}\) xenografts via reduction in Chk1/2 expression and cell death induction in the G\(_2\)-M phase.\(^3\) It promotes autophagic cell death in ovarian cancer cells via downregulation of p62/SQSTM1.\(^4\) Quinacrine is also an inhibitor of phospholipase A\(_2\).\(^5\)

1) Ehsanian et al. (2011), Beyond DNA binding – a review of the potential mechanisms mediating quinacrine’s therapeutic activities in parasitic infections, inflammation, and cancers; Cell Commun.Signal. 9 13
2) Jing et al. (2018), Vorinostat and quinacrine have synergistic effects in T-cell acute lymphoblastic leukemia through reactive oxygen species increase and mitophagy inhibition; Cell Death Disease 9 589
3) Park et al. (2018), Therapeutic Effect of Quinacrine, an Antiprotozoan Drug, by Selective Suppression of p-CHK1/2 in p53-Negative Malignant Cancers; Mol.Cancer Res. 16 935
4) Khurana et al. (2015), Quinacrine promotes autophagic cell death and chemosensitivity in ovarian cancer and attenuates tumor growth; Oncotarget 6 36354
5) Chan et al. (1982), Biphasic modulation of platelet phospholipase A2 activity and platelet aggregation by mepacrine (quinacrine); Biochim.Biophys.Acta 713 170

**PHYSICAL DATA**

- Molecular Weight: 472.88
- Molecular Formula: C\(_{23}\)H\(_{30}\)ClN\(_3\)O\(_2\)-2HCl
- Purity: >98% by HPLC
- NMR: (Conforms)
- Solubility: Water (>25 mg/mL), DMSO (>10 mg/mL)
- Physical Description: Yellow solid
- Storage and Stability: Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 1 month. Make solutions in water fresh daily.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.

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