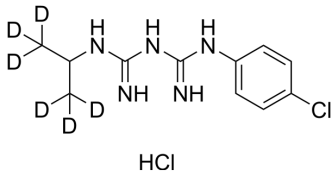
Proguanil-d6 hydrochloride

Cat. No.:	HY-B0806AS1
Molecular Formula:	$C_{11}H_{11}D_6Cl_2N_5$
Molecular Weight:	296.23
Target:	Isotope-Labeled Compounds; Parasite; Antifolate
Pathway:	Others; Anti-infection; Cell Cycle/DNA Damage
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



BIOLOGICAL ACTIVITY

Description	Proguanil-d_6 hydrochloride is the deuterium labeled Proguanil hydrochloride (HY-B0806A). Proguanil hydrochloride, an antimalarial proagent, is metabolized to the active metabolite Cycloguanil (HY-12784). Proguanil hydrochloride is a dihydrofolate reductase (DHFR) inhibitor[1][2][3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Pudney M, et al. Atovaquone and proguanil hydrochloride: a review of nonclinical studies. J Travel Med. 1999 May;6 Suppl 1:S8-12.

[3]. Srivastava IK, et al. A mechanism for the synergistic antimalarial action of atovaquone and proguanil. Antimicrob Agents Chemother. 1999 Jun;43(6):1334-9.

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