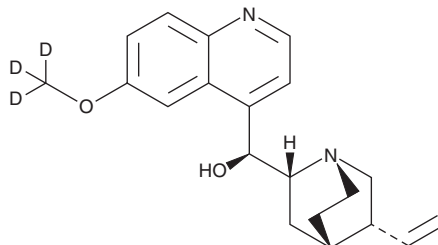


PRODUCT INFORMATION



Quinidine-d₃ Item No. 28884

CAS Registry No.:	1267657-68-0
Formal Name:	6'-(methoxy-d ₃)-cinchonan-9S-ol
Synonyms:	(+)-Quinidine-d ₃ , β-Quinidine-d ₃
MF:	C ₂₀ H ₂₁ D ₃ N ₂ O ₂
FW:	327.4
Chemical Purity:	≥95% (Quinidine)
Deuterium	
Incorporation:	≥99% deuterated forms (d ₁ -d ₃); ≤1% d ₀
Supplied as:	A 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

Quinidine-d₃ is intended for use as an internal standard for the quantification of quinidine (Item No. 20356) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Quinidine-d₃ is supplied as a solid. A stock solution may be made by dissolving the quinidine-d₃ in the solvent of choice, which should be purged with an inert gas. Quinidine-d₃ is slightly soluble in chloroform and methanol (warmed).

Description

Quinidine is a stereoisomer of the antimalarial agent quinine (Item No. 23958) and a class Ia antiarrhythmic agent.^{1,2} Quinidine blocks the voltage-gated sodium (Na_v) channel Na_v1.5 in a use-dependent manner.¹ It decreases the amplitude and duration of action potentials in isolated canine ventricular myocytes.³ Quinidine inhibits K_{Kr}, peak I_{Na}, and late I_{Na} (IC₅₀s = 4.5, 11, and 12 μM, respectively) and can induce torsade de pointes in isolated rabbit hearts when used at a concentration of 1 μM.² It induces QT prolongation in dogs.⁴ Quinidine also binds to M₂ muscarinic acetylcholine receptors (K_i = 7.5 μM for human recombinant receptors expressed in HM2-B10 cells).⁵ Formulations containing quinidine have been used in the treatment of atrial fibrillation and ventricular arrhythmias.

References

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3. Salata, J.J. and Wasserstrom, J.A. Effects of quinidine on action potentials and ionic currents in isolated canine ventricular myocytes. *Circ. Res.* **62(2)**, 324-337 (1988).
4. Rakhit, A., Guentert, T.W., Holford, N.H.G., et al. Pharmacokinetics and pharmacodynamics of quinidine and its metabolite, quinidine-N-oxide, in beagle dogs. *Eur. J. Drug Metab. Pharmacokinet.* **9(4)**, 315-324 (1984).
5. Kovacs, I., Yamamura, H.I., Waite, S.L., et al. Pharmacological comparison of the cloned human and rat M₂ muscarinic receptor genes expressed in the murine fibroblast (B82) cell line. *J. Pharmacol. Exp. Ther.* **284(2)**, 500-507 (1998).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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