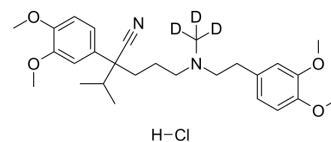


Verapamil-d₃ hydrochloride

Cat. No.:	HY-A0064S
CAS No.:	2714485-49-9
Molecular Formula:	C ₂₇ H ₃₆ D ₃ ClN ₂ O ₄
Molecular Weight:	494.08
Target:	P-glycoprotein; Calcium Channel; Cytochrome P450; Isotope-Labeled Compounds
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling; Metabolic Enzyme/Protease; Others
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (101.20 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.0240 mL	10.1198 mL	20.2396 mL
5 mM	0.4048 mL	2.0240 mL	4.0479 mL
10 mM	0.2024 mL	1.0120 mL	2.0240 mL

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

BIOLOGICAL ACTIVITY

Description

Verapamil-d₃ (hydrochloride) is the deuterium labeled Verapamil hydrochloride. Verapamil hydrochloride ((±)-Verapamil hydrochloride) is a calcium channel blocker and a potent and orally active first-generation P-glycoprotein (P-gp) inhibitor. Verapamil hydrochloride also inhibits CYP3A4. Verapamil hydrochloride has the potential for high blood pressure, heart arrhythmias and angina research^{[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.

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- [6]. Zhou P, et al. Anti-arrhythmic effect of Verapamil is accompanied by preservation of cx43 protein in rat heart. PLoS One. 2013 Aug 12;8(8):e71567.
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Caution: Product has not been fully validated for medical applications. For research use only.

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