Ranolazine-d_8

Cat. No.: HY-B0280S1

CAS No.: 1092804-88-0

Molecular Formula: $C_{24}H_{25}D_8N_3O_4$

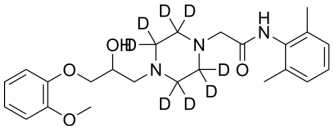
Molecular Weight: 435.59

Target: Sodium Channel; Calcium Channel; Isotope-Labeled Compounds

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (229.57 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2957 mL	11.4787 mL	22.9574 mL
	5 mM	0.4591 mL	2.2957 mL	4.5915 mL
	10 mM	0.2296 mL	1.1479 mL	2.2957 mL

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

BIOLOGICAL ACTIVITY

Description

Ranolazine-d_8 is the deuterium labeled Ranolazine. Ranolazine (CVT 303) is an anti-angina agent that achieves its effects by inhibiting the late phase of inward sodium current (INa and IKr with IC50 values of 6 μM and 12 μM, respectively) without affecting heart rate or blood pressure (BP)[1][2]. Ranolazine is also a partial fatty acid oxidation (FAO) inhibitor[3]. Antianginal agent.

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]. Keating GM. Ranolazine: a review of its use as add-on therapy in patients with chronic stable angina pectoris. Drugs. 2013 Jan;73(1):55-73.

[3]. Wang WQ, et al. Antitorsadogenic effects of ({+/-})-N-(2,6-dimethyl-phenyl)-(4[2-hydroxy-3-(2-methoxyphenoxy)propyl]-1-piperazine (ranolazine) in anesthetized rabbits. J Pharmacol Exp Ther. 2008 Jun;325(3):875-81.

[4]. Zacharowski K, et al. Ranolazine, a partial fatty acid oxidation inhibitor, reduces myocardial infarct size and cardiac troponin T release in the rat. Eur J Pharmacol. 2001 Apr 20;418(1-2):105-10.

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