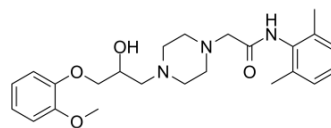


Ranolazine

Cat. No.:	HY-B0280		
CAS No.:	95635-55-5		
Molecular Formula:	C ₂₄ H ₃₃ N ₃ O ₄		
Molecular Weight:	427.54		
Target:	Sodium Channel; Calcium Channel		
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling		
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 : 125 mg/mL (292.37 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.3390 mL	11.6948 mL	23.3896 mL
		5 mM	0.4678 mL	2.3390 mL	4.6779 mL
10 mM		0.2339 mL	1.1695 mL	2.3390 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (4.87 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.87 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.87 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Ranolazine (CVT 303) is an anti-angina drug that achieves its effects by inhibiting the late phase of inward sodium current (I _{Na} and I _{Kr} with IC ₅₀ 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] .
IC₅₀ & Target	IC ₅₀ : 6 μM (I _{Na}), 12 μM (I _{Kr}) ^[1]
In Vivo	Ranolazine (Bolus injection 10 mg/kg and infusion 9.6 mg/kg/h; bolus injection; for 145 minutes; male Wistar rats) treatment

significantly reduces infarct size and cardiac troponin T release in rats subjected to left anterior descending coronary artery occlusion-reperfusion^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats (240-350 g) ^[3]
Dosage:	Bolus injection 10 mg/kg and infusion (9.6 mg/kg/h)
Administration:	Bolus injection; for 145 minutes
Result:	Significantly reduced infarct size and cardiac troponin T release in rats subjected to left anterior descending coronary artery occlusion-reperfusion.

CUSTOMER VALIDATION

- Theranostics. 2018 Oct 29;8(19):5452-5468.

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REFERENCES

[1]. 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.

[2]. Wang WQ, et al. Antitardogenic 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.

[3]. 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.

Caution: Product has not been fully validated for medical applications. For research use only.

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