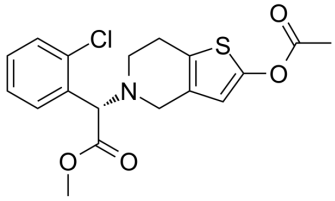
Vicagrel

Cat. No.:	HY-118284
CAS No.:	1314081-53-2
Molecular Formula:	$C_{18}H_{18}ClNO_4S$
Molecular Weight:	379.86
Target:	P2Y Receptor
Pathway:	GPCR/G Protein
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 250 mg/mL (658.14 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.6325 mL	13.1627 mL	26.3255 mL
	5 mM	0.5265 mL	2.6325 mL	5.2651 mL
	10 mM	0.2633 mL	1.3163 mL	2.6325 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.48 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Vicagrel is a potent, safe and orally active antiplatelet agent, which works by irreversibly inhibiting P2Y12 receptor. Vicagrel can be used for the research of blood clots in coronary artery disease, peripheral vascular disease, and cerebrovascular disease[1][2].

In Vitro

Vicagrel (compound 9a) (20 μM, 30 min) activates production of the active metabolite from in vitro rat liver microsomal[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Vicagrel (compound 9a) (oral, 3 mg/kg) has inhibitory effect on ADP-induced platelet aggregation in rats[1].
Vicagrel (oral, 1.14 mg/mL, 0-24 h) has giood preliminary pharmacokinetic with high bioavailability and low clinically effective dose[1].
Vicagrel (oral, 5 g/kg, single, for 14 days) has low dose-related toxicity in mouse[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats[1] (200−250 g)
Dosage:	3 mg/kg
Administration:	oral
Result:	Inhibitied platelet aggregation by ADP-induced in rats.

Animal Model:	SD male rats[1]
Dosage:	1.14 mg/mL
Administration:	oral, 0-24 h
Result:	Could be readily converted into clopidogrel thiolactone and had high bioavailability.

Animal Model:	Mice[1]
Dosage:	5 g/kg
Administration:	oral, single, for 14 days
Result:	Had very low acute toxicity.

CUSTOMER VALIDATION

- Chem Biol Interact. 25 January 2022, 109775.

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REFERENCES

[1]. French, et al. Method for preparing vicagrel. Patent. WO2014040498A1.

[2]. Jiaqi Shan, et al. Overcoming clopidogrel resistance: discovery of vicagrel as a highly potent and orally bioavailable antiplatelet agent. J Med Chem

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