Clopidogrel thiolactone

Cat. No.: HY-15876

CAS No.: 1147350-75-1

Molecular Formula: $C_{16}H_{16}ClNO_3S$

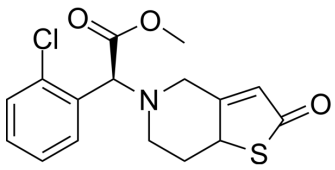
Molecular Weight: 337.82

Target: P2Y Receptor; Drug Metabolite

Pathway: GPCR/G Protein; Metabolic Enzyme/Protease

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 : 50 mg/mL (148.01 mM; Need ultrasonic)
Ethanol : 5 mg/mL (14.80 mM; ultrasonic and warming and heat to 40°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.9602 mL	14.8008 mL	29.6016 mL
5 mM	0.5920 mL	2.9602 mL	5.9203 mL
10 mM	0.2960 mL	1.4801 mL	2.9602 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: ≥ 2.5 mg/mL (7.40 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Clopidogrel thiolactone is an important intermediate in the metabolism of clopidogrel (HY-15283). Clopidogrel thiolactone has antiplatelet aggregatione effects. Clopidogrel is a P2Y12 receptor inhibitor that exerts antiplatelet effects[1][2].

IC_{50} & Target

P2Y12 Receptor

In Vivo

Clopidogrel thiolactone (8 μm/kg; i.v.) has good biological availability and pharmacokinetic parameters in Sprague-Dawley male rats[1].

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

Animal Model:	Sprague-Dawley male rats[1]

Dosage:	8 μm/kg; with orally clopidogrel (24 μm/kg)
Administration:	Intravenous injection; collected blood at 0 h (before dosing) and 0.083, 0.167, 0.5, 1, 2, 4, 6, 8, 24 h postdose.
Result:	

REFERENCES

[1]. Shan J, et, al. Overcoming clopidogrel resistance: discovery of vicagrel as a highly potent and orally bioavailable antiplatelet agent. J Med Chem. 2012 Apr 12;55(7):3342-52.

[2]. Hagihara K, et, al. Comparison of formation of thiolactones and active metabolites of prasugrel and clopidogrel in rats and dogs. Xenobiotica. 2009 Mar;39(3):218-26.

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