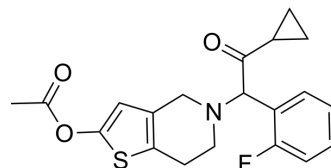


## Prasugrel

Cat. No.:	HY-15284		
CAS No.:	150322-43-3		
Molecular Formula:	C <sub>20</sub> H <sub>20</sub> FNO <sub>3</sub> S		
Molecular Weight:	373.44		
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 : 100 mg/mL (267.78 mM; Need ultrasonic)  
 H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.6778 mL	13.3890 mL	26.7781 mL
	5 mM	0.5356 mL	2.6778 mL	5.3556 mL
	10 mM	0.2678 mL	1.3389 mL	2.6778 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (6.69 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Prasugrel (PCR 4099), a thienopyridine and proagent, inhibits platelet function. Prasugrel is an orally active and potent P2Y<sub>12</sub> receptor antagonist, and inhibits ADP-induced platelet aggregation<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

P2Y<sub>12</sub> Receptor

#### In Vivo

In rat platelets, Prasugrel active metabolite inhibits in vitro platelet aggregation induced by adenosine ADP (10μM) with an

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IC<sub>50</sub> value of 1.8 μM<sup>[2]</sup>.

Prasugrel acts faster and is significantly more potent than Clopidogrel in vivo. Prasugrel is an inactive prodrug that requires metabolic processing in vivo to generate the active antiplatelet metabolite. Prasugrel is rapidly absorbed from the gut. After oral administration of standard-loading doses of 60 mg, maximum plasma levels of the active metabolite are achieved within 1 h, effective, maximum inhibition of platelet aggregation at 1-2 h<sup>[1]</sup>.

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

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## REFERENCES

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[1]. Wijeyeratne YD, et al. Anti-platelet therapy: ADP receptor antagonists. Br J Clin Pharmacol. 2011 Oct;72(4):647-57.

[2]. Sugidachi A, et al. The greater in vivo antiplatelet effects of prasugrel as compared to clopidogrel reflect more efficient generation of its active metabolite with similar antiplatelet activity to that of clopidogrel's active metabolite. J Thromb Haemost. 2007 Jul;5(7):1545-51.

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

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