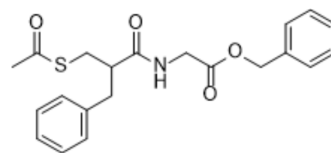


## Racecadotril

<b>Cat. No.:</b>	HY-17399		
<b>CAS No.:</b>	81110-73-8		
<b>Molecular Formula:</b>	C <sub>21</sub> H <sub>23</sub> NO <sub>4</sub> S		
<b>Molecular Weight:</b>	385.48		
<b>Target:</b>	Neprilysin		
<b>Pathway:</b>	Metabolic Enzyme/Protease		
<b>Storage:</b>	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 (259.42 mM)  
 \* "≥" means soluble, but saturation unknown.

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.5942 mL	12.9708 mL	25.9417 mL
5 mM	0.5188 mL	2.5942 mL	5.1883 mL
10 mM	0.2594 mL	1.2971 mL	2.5942 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 (6.49 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
 Solubility: 2.5 mg/mL (6.49 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.5 mg/mL (6.49 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Racecadotril (Acetorphan) is a neutral endopeptidase (NEP) inhibitor. Racecadotril and its active metabolite Thiorphan inhibits purified NEP activity from mouse brain with K<sub>i</sub>s of 4500 and 6.1 nM, , respectively. Antidiarrheal agent<sup>[1]</sup>.

#### In Vivo

In mice, following i.v. administration, Racecadotril is rapidly metabolized to Thiorphan; thus, 30 min after the injection only Thiorphan is recovered from the kidney whereas the parent compound Racecadotril is not detected<sup>[1]</sup>.  
 In rats 92% of a single-dose (10 mg/kg) of radioactively labeled Racecadotril is eliminated within 24 h<sup>[1]</sup>.

Racecadotril is a neutral endopeptidase (NEP) inhibitor with known antidiarrheal activity in animals. Orally administered Racecadotril (100 mg/kg ) shows efficacy in a rat model of castor oil-induced diarrhea<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	6-to-7-week-old male Wistar rats <sup>[2]</sup>
Dosage:	100 mg/kg
Administration:	A single oral treatment; 30 minutes before castor oil administration.
Result:	Significantly reduced stool output but did not prevent the occurrence of diarrhea (100% incidence).

## REFERENCES

[1]. Marion Eberlin, et al. A comprehensive review of the pharmacodynamics, pharmacokinetics, and clinical effects of the neutral endopeptidase inhibitor Racecadotril. *Front Pharmacol.* 2012 May 30;3:93.

[2]. David W Griggs, et al. Pharmacologic Comparison of Clinical Neutral Endopeptidase Inhibitors in a Rat Model of Acute Secretory Diarrhea. *J Pharmacol Exp Ther.* 2016 May;357(2):423-31.

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

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