Maropitant

Cat. No.: HY-10053

CAS No.: 147116-67-4

Molecular Formula: $C_{32}H_{40}N_2O$

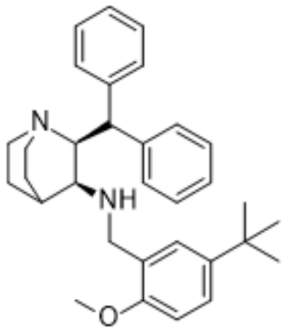
Molecular Weight: 468.67

Target: Neurokinin Receptor

Pathway: GPCR/G Protein; Neuronal Signaling

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 : 25 mg/mL (53.34 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1337 mL	10.6685 mL	21.3370 mL
	5 mM	0.4267 mL	2.1337 mL	4.2674 mL
	10 mM	0.2134 mL	1.0668 mL	2.1337 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.33 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Maropitant is a selective and orally active neurokinin (NK1) receptor antagonist. Maropitant acts by blocking the binding of substance P within the emetic center and the chemoreceptor trigger zone (CRTZ). Maropitant is highly effective in preventing vomiting[1][2].

IC_{50} & Target

NK1

In Vivo

Treatment with 1 mg/kg Maropitant citrate, significantly reduces the size of ulcerative dermatitis (UD) lesions in mice. Intravenous Maropitant decreases MAC by 16%. In contrast, epidural administration of either saline or Maropitant does not change the MAC (2.17% and 1.92 %, respectively).

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

REFERENCES

[1]. Lesman SP, Boucher JF, Grover GS, et al. The pharmacokinetics of maropitant citrate dosed orally to dogs at 2 mg/kg and 8 mg/kg once daily for 14 days consecutive days. J Vet Pharmacol Ther. 2012 Nov 20.

[2]. Alvillar BM, Boscan P, Mama KR, et al. Effect of epidural and intravenous use of the neurokinin-1 (NK-1) receptor antagonist maropitant on the sevoflurane minimum alveolar concentration (MAC) in dogs. Vet Anaesth Analg. 2012 Mar;39(2):201-5.

[3]. Ramsey DS, Kincaid K, Watkins JA et al. Safety and efficacy of injectable and oral maropitant, a selective neurokinin 1 receptor antagonist, in a randomized clinical trial for treatment of vomiting in dogs. J Vet Pharmacol Ther. 2008 Dec;31(6):538-43. doi: 10.1111/j.1365-2885.2008.00992.x.

[4]. Benchaoui HA, Cox SR, Schneider RP et al. The pharmacokinetics of maropitant, a novel neurokinin type-1 receptor antagonist, in dogs. J Vet Pharmacol Ther. 2007 Aug;30(4):336-44.

[5]. Maropitant

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