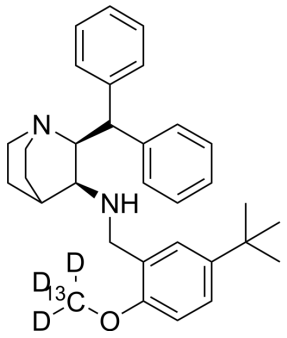
Maropitant-$^{13}C,d_3$

Cat. No.:	HY-10053S1
Molecular Formula:	$C_{31}{}^{13}CH_{37}D_3N_2O$
Molecular Weight:	472.68
Target:	Neurokinin Receptor; Isotope-Labeled Compounds
Pathway:	GPCR/G Protein; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Maropitant-$^{13}C,d_3$ is the ^{13}C- and deuterium labeled Maropitant. 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].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[92]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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.

[2]. 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.

[3]. 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.

[4]. Maropitant

[5]. 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.

[6]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-223.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA