Tolvaptan-d₇

Cat. No.:	HY-17000S	
CAS No.:	1246818-18-7	
Molecular Formula:	C ₂₆ H ₁₈ D ₇ ClN ₂ O ₃	
Molecular Weight:	455.98	
Target:	Vasopressin Receptor; Autophagy; Isotope-Labeled Compounds	
Pathway:	GPCR/G Protein; Autophagy; Others	CI CI
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.	HO

BIOLOGICAL ACTIVITY		
Description	Tolvaptan-d ₇ is the deuterium labeled Tolvaptan. Tolvaptan is a selective, competitive arginine vasopressin receptor 2 antagonist with an IC50 of 1.28μM for the inhibition of AVP-induced platelet aggregation[1][2].	
IC ₅₀ & Target	V2 Receptor	
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 ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

[2]. Friedman B, Cirulli J.Hyponatremia in critical care patients: Frequency, outcome, characteristics, and treatment with the vasopressin V(2)-receptor antagonist tolvaptan. J Crit Care. 2012 Aug 8.

[3]. Inomata T.Tolvaptan (vasopressin receptor antagonist).Nihon Rinsho. 2011 Nov;69 Suppl 9:408-11.

[4]. Vaduganathan M, Gheorghiade M, Pang PS, Konstam MA, Zannad F, Swedberg K, Grinfeld L, Burnett JC Jr, Krasa HB, Zimmer C, Blair J, Ouyang J, Maggioni AP; EVEREST investigators. Efficacy of oral tolvaptan in acute heart failure patients with hypotension and renal impairment. J Cardiovasc Med (Hagerstown). 2012 Jul; 13(7): 415-22.

[5]. Y Yamamura et al. OPC-41061, a Highly Potent Human Vasopressin V2-Receptor Antagonist: Pharmacological Profile and Aquaretic Effect by Single and Multiple Oral Dosing in Rats. J. Pharmacol. Exp. Ther. 1998, 287(3), 860-867.

[6]. RW Schrier et al. Tolvaptan, a Selective Oral Vasopressin V2-Receptor Antagonist, for Hyponatremia. N Engl J Med 2006, 355, 2099-2112.

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

Tel: 609-228-6898

Fax: 609-228-5909

09 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA

Product Data Sheet

