Product Data Sheet

Product Name: 4-Hydroxypropranolol-d7
Cat. No.: GC64116

Chemical Properties

Cas. No.	1219908-86-7		
Formula	C16H14D7NO3	M.Wt	282.39
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	4-Hydroxypropranolol-d7		

Background

4-Hydroxypropranolol-d7 ((±)-4-Hydroxy Propranolol-d7) is the deuterium labeled 4-Hydroxypropranolol hydrochloride. 4-Hydroxypropranolol hydrochlorid is an active metabolite of Propranolol. 4-Hydroxypropranolol hydrochlorid is of comparable potency to Propranolol. 4-Hydroxypropranolol hydrochlorid inhibits β1- and β2-adrenergic receptors with pA2 values of 8.24 and 8.26, respectively. 4-Hydroxypropranolol hydrochlorid has intrinsic sympathomimetic activity, membrane stabilizing activity and potent antioxidant properties[1][2][3].

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].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216. [2]. Fitzgerald JD, et al. Pharmacology of 4-hydroxypropranolol, a metabolite of propranolol. Br J Pharmacol. 1971 Sep;43(1):222-35.
[3]. Nelson WL, et al. The 3,4-catechol derivative of propranolol, a minor dihydroxylated metabolite. J Med Chem. 1984 Jul;27(7):857-61.

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[4]. Ivan Tong Mak, et al. Potent Antioxidant Properties of 4-Hydroxyl-propranolol. Journal of Pharmacology and Experimental Therapeutics. 2004, 308(1):85-90.

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