Ivabradine-d6

Cat. No.: HY-B0162S

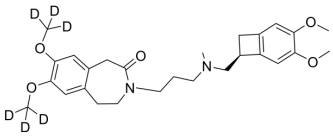
Molecular Formula: $C_{27}H_{30}D_6N_2O_5$

Molecular Weight: 474.62

Target: HCN Channel

Pathway: Membrane Transporter/Ion Channel

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ivabradine-d_6 is the deuterium labeled Ivabradine[1]. Ivabradine is a potent and orally active HCN (hyperpolarization-activated cyclic nucleotide-gated) channel blocker that inhibits the cardiac pacemaker current (If). Ivabradine reduces dose-dependently heart rate without modification of blood pressure. Ivabradine shows anticonvulsant, anti-ischaemic and anti-anginal activity[2][3][4][5].
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 Feb;53(2):211-216.

[2]. Tardif JC, et al. Efficacy of ivabradine, a new selective I(f) inhibitor, compared with atenolol in patients with chronic stable angina. Eur Heart J. 2005 Dec;26(23):2529-36.

[3]. Mulder P, et al. Heart rate slowing for myocardial dysfunction/heart failure. Adv Cardiol. 200643:97-105.

[4]. Cavalcante TMB, et al. Ivabradine possesses anticonvulsant and neuroprotective action in mice. Biomed Pharmacother. 2019 Jan109:2499-2512.

[5]. Du XJ, et al. I(f) channel inhibitor ivabradine lowers heart rate in mice with enhanced sympathoadrenergic activities. Br J Pharmacol. 2004 May142(1):107-12.

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