Product Data Sheet

Clevidipine-15N,d₁₀

Cat. No.: HY-17436S4

Molecular Formula: $C_{21}H_{13}D_{10}Cl_2^{15}NO_6$

Molecular Weight: 467.37

Target: Calcium Channel; Isotope-Labeled Compounds

Pathway: Membrane Transporter/Ion Channel; Neuronal Signaling; Others

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

Analysis.

BIOLOGICAL ACTIVITY

Description	Clevidipine- 15 N,d $_{10}$ is 15 N and deuterated labeled Clevidipine (HY-17436). Clevidipine is a short-acting dihydropyridine calcium channel antagonist (IC50= 7.1 nM, V(H)=-40 mV).
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]. Yi X, Vivien B, Lynch C 3rd. Clevidipine blockade of L-type Ca2+ currents: steady-state and kinetic electrophysiological studies in guinea pigventricular myocytes.

[2]. Huraux C, Makita T, Szlam F, The vasodilator effects of clevidipine on human internal mammary artery. Anesth Analg. 1997 Nov;85(5):1000-4.

[3]. Ericsson H, et al. In vitro hydrolysis rate and protein binding of clevidipine, a new ultrashort-acting calcium antagonist metabolised by esterases, in different animal species and man. Eur J Pharm Sci. 1999 Apr;8(1):29-37.

[4]. Ericsson H, et al. Pharmacokinetics of new calcium channel antagonist clevidipine in the rat, rabbit, and dog and pharmacokinetic/pharmacodynamic relationship in anesthetized dogs. Drug Metab Dispos. 1999 May;27(5):558-64.

[5]. Schwieler JH, et al. Circulatory effects and pharmacology of clevidipine, a novel ultra short acting and vascular selective calcium antagonist, in hypertensive humans. J Cardiovasc Pharmacol. 1999 Aug;34(2):268-74.

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

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

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