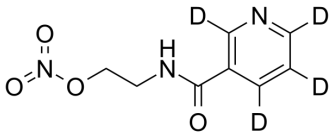
Nicorandil-d4

Cat. No.:	HY-B0341S
CAS No.:	1132681-23-2
Molecular Formula:	$C_8H_5D_4N_3O_4$
Molecular Weight:	215.2
Target:	Potassium Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Nicorandil-d4 (SG-75-d4) is the deuterium labeled Nicorandil. Nicorandil (SG-75) is a potent potassium channel activator and targets vascular nucleoside diphosphate-dependent K^+ channels and cardiac ATP-sensitive K^+ channels (K_{ATP}). Nicorandil is a nicotinamide ester with vasodilatory and cardioprotective effects and has the potential for angina and forischemic heart diseases[1][2][3].
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]. Nakae, I., et al., Effects of intravenous nicorandil on coronary circulation in humans: plasma concentration and action mechanism. J Cardiovasc Pharmacol, 2000. 35(6): p. 919-25.

[3]. Sauzeau, V., et al., Cyclic GMP-dependent protein kinase signaling pathway inhibits RhoA-induced Ca2+ sensitization of contraction in vascular smooth muscle. J Biol Chem, 2000. 275(28): p. 21722-9.

[4]. Mitsuhiko Yamada, et al. The nucleotide-binding domains of sulfonylurea receptor 2A and 2B play different functional roles in nicorandil-induced activation of ATP-sensitive K+ channels. Mol Pharmacol. 2004 May;65(5):1198-207.

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