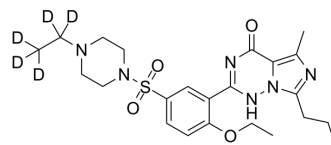


Vardenafil-d5

Cat. No.:	HY-B0442S
CAS No.:	1189685-70-8
Molecular Formula:	C ₂₃ H ₂₇ D ₅ N ₆ O ₄ S
Molecular Weight:	493.63
Target:	Phosphodiesterase (PDE); Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Vardenafil-d5 is deuterium labeled Vardenafil. Vardenafil is a selective, orally active, potent inhibitor of phosphodiesterase-5 (PDE5), with an IC ₅₀ of 0.7 nM. Vardenafil shows selectivity over PDE1 (180 nM), PDE6 (11 nM), PDE2, PDE3, and PDE4 (>1000 nM). Vardenafil competitively inhibits cyclic guanosine monophosphate (cGMP) hydrolysis and thus increases cGMP levels. Vardenafil can be used for the research of erectile dysfunction ^{[1][2]} .
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]. Ashour AE, et al. Vardenafil dihydrochloride. *Profiles Drug Subst Excip Relat Methodol.* 2014;39:515-544.
- [3]. Saenz de Tejada I, et al. The phosphodiesterase inhibitory selectivity and the in vitro and in vivo potency of the new PDE5 inhibitor vardenafil. *Int J Impot Res.* 2001;13(5):282-290.

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

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