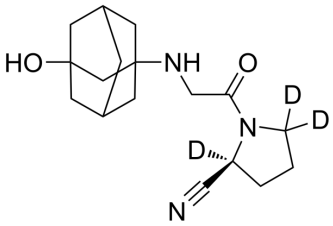
Vildagliptin-d_3

Cat. No.:	HY-14291S
CAS No.:	1217546-82-1
Molecular Formula:	$C_{17}H_{22}D_3N_3O_2$
Molecular Weight:	306.42
Target:	Dipeptidyl Peptidase; Ferroptosis; Apoptosis; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Apoptosis; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Vildagliptin-d_3 is the deuterium labeled Vildagliptin. Vildagliptin (LAF237) is a potent, stable, selective dipeptidyl peptidase IV (DPP-IV) inhibitor with an IC50 of 3.5 nM in human Caco-2 cells. Vildagliptin possesses excellent oral bioavailability and potent antihyperglycemic activity[1][2].
IC_{50} & Target	DPP-4
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]. Villhauer EB, et al. 1-[[(3-hydroxy-1-adamantyl)amino]acetyl]-2-cyano-(S)-pyrrolidine: a potent, selective, and orally bioavailable dipeptidyl peptidase IV inhibitor with antihyperglycemic properties. J Med Chem. 2003 Jun 19;46(13):2774-89.

[3]. Wu YJ, et al. Dipeptidyl peptidase-4 inhibitor, vildagliptin, inhibits pancreatic beta cell apoptosis in associationwith its effects suppressing endoplasmic reticulum stress in db/db mice. Metabolism. 2015 Feb;64(2):226-35.

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