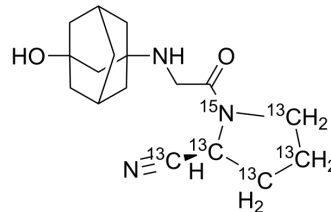


Vildagliptin-¹³C₅,¹⁵N

Cat. No.:	HY-14291S2
CAS No.:	1044741-01-6
Molecular Formula:	C ₁₂ ¹³ C ₅ H ₂₅ N ₂ ¹⁵ NO ₂
Molecular Weight:	309.36
Target:	Isotope-Labeled Compounds
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Vildagliptin- ¹³ C ₅ , ¹⁵ N (LAF237- ¹³ C ₅ , ¹⁵ N; NVP-LAF 237- ¹³ C ₅ , ¹⁵ N) is a ¹³ C- and ¹⁵ N-labeled Vildagliptin (HY-14291). Vildagliptin (LAF237) is a potent, stable, selective dipeptidyl peptidase IV (DPP-IV) inhibitor with an IC ₅₀ of 3.5 nM in human Caco-2 cells. Vildagliptin possesses excellent oral bioavailability and potent antihyperglycemic activity ^{[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]. 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.
- [2]. Wu YJ, et al. Dipeptidyl peptidase-4 inhibitor, vildagliptin, inhibits pancreatic beta cell apoptosis in association with its effects suppressing endoplasmic reticulum stress in db/db mice. *Metabolism.* 2015 Feb;64(2):226-35.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-246.

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

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