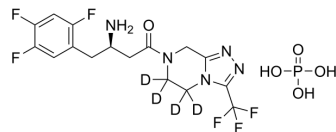


Sitagliptin-d₄ phosphate

Cat. No.:	HY-13749AS
CAS No.:	1432063-88-1
Molecular Formula:	C ₁₆ H ₁₄ D ₄ F ₆ N ₅ O ₅ P
Molecular Weight:	509.33
Target:	Dipeptidyl Peptidase; Autophagy
Pathway:	Metabolic Enzyme/Protease; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Sitagliptin-d ₄ (phosphate) is the deuterium labeled Sitagliptin phosphate. Sitagliptin phosphate (MK-0431 phosphate) is a potent inhibitor of DPP4 with an IC ₅₀ of 19 nM in Caco-2 cell extracts[1][2].
IC₅₀ & 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

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- [2]. Thomas, L., et al. (R)-8-(3-amino-piperidin-1-yl)-7-but-2-ynyl-3-methyl-1-(4-methyl-quinazolin-2-ylm ethyl)-3,7-dihydro-purine-2,6-dione (BI 1356), a novel xanthine-based dipeptidyl peptidase 4 inhibitor, has a superior potency and longer duration of acti
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- [4]. Sangle, G.V., et al., Novel biological action of the dipeptidylpeptidase-IV inhibitor, sitagliptin, as a glucagon-like peptide-1 secretagogue. *Endocrinology*, 2012. 153(2): p. 564-73.
- [5]. Kim, S.J., et al., Inhibition of dipeptidyl peptidase IV with sitagliptin (MK0431) prolongs islet graft survival in streptozotocin-induced diabetic mice. *Diabetes*, 2008. 57(5): p. 1331-9.
- [6]. Beconi, M.G., et al. Disposition of the dipeptidyl peptidase 4 inhibitor sitagliptin in rats and dogs. *Drug Metab Dispos*, 2007. 35(4): p. 525-32.

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

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