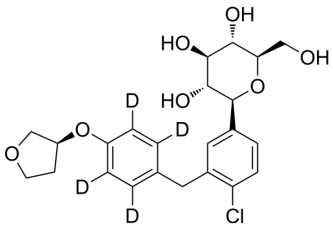
Empagliflozin-d_4

Cat. No.:	HY-15409S
CAS No.:	2749293-95-4
Molecular Formula:	$C_{23}H_{23}D_4ClO_7$
Molecular Weight:	454.93
Target:	SGLT
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Empagliflozin-d_4 is deuterium labeled Empagliflozin. Empagliflozin (BI 107730 is a selective sodium glucose cotransporter-2 (SGLT-2) inhibitor with an IC50 of 3.1 nM for human SGLT-2[1].
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]. Cheng ST, et al. The Effects of Empagliflozin, an SGLT2 Inhibitor, on Pancreatic β-Cell Mass and Glucose Homeostasis in Type 1 Diabetes. PLoS One. 2016 Jan 25;11(1):e0147391.

[3]. Grempler R, et al. Empagliflozin, a novel selective sodium glucose cotransporter-2 (SGLT-2) inhibitor: characterisation and comparison with other SGLT-2 inhibitors. Diabetes Obes Metab. 2012 Jan;14(1):83-90.

[4]. Nikole J.ByrneBSc, et al. Empagliflozin Prevents Worsening of Cardiac Function in an Experimental Model of Pressure Overload-Induced Heart Failure. JACC Basic Transl Sci. 2017 Aug;2(4):347-354.

[5]. Sakaeda T, et al. Susceptibility to serious skin and subcutaneous tissue disorders and skin tissue distribution of sodium-dependent glucose co-transporter type 2 (SGLT2) inhibitors. Int J Med Sci. 2018 Jun 13;15(9):937-943.

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