Velagliflozin proline hydrate

Cat. No.: HY-109018B

CAS No.: 1661838-94-3

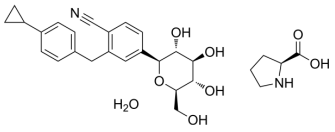
Molecular Formula: $C_{28}H_{36}N_2O_8$

Molecular Weight: 528.59

Target: SGLT

Pathway: Membrane Transporter/Ion Channel

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 200 mg/mL (378.37 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.8918 mL	9.4591 mL	18.9183 mL
	5 mM	0.3784 mL	1.8918 mL	3.7837 mL
	10 mM	0.1892 mL	0.9459 mL	1.8918 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 5 mg/mL (9.46 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 5 mg/mL (9.46 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 5 mg/mL (9.46 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Velagliflozin proline hydrate is the clinical form of Velagliflozin (HY-109018). Velagliflozin is an oral sodium-glucose cotransporter 2 (SGLT2) inhibitor with antidiabetic activity. Velagliflozin reduces renal glucose reabsorption and stimulates glycosuria, which lowers blood sugar and insulin concentrations[1].

IC_{50} & Target

SGLT2

In Vitro

Velagliflozin is a sodium-glucose cotransporter 2 (SGLT2) inhibitor, with anti-diabetic activity[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo	Velagliflozin proline hydrate (1 mg/kg; p.o.; single dose) increases cholesterol, albumin, beta-hydroxybutyrate (BHB), nonesterified fatty acids (NEFA), and urinary glucose excretion, and decreases respiratory exchange ratio in cats[1]. Velagliflozin proline hydrate (0.3 mg/kg; p.o.; once daily for 18 d) is well tolerated and can improve insulin disorders and prevent laminitis in ponies by reducing the high insulin response of dietary non-structural carbohydrates (NSC)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Patent. US20200352968A1.

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REFERENCES

[1]. Hoenig M, et al. Effects of the sodium-glucose cotransporter 2 (SGLT2) inhibitor velagliflozin, a new drug with therapeutic potential to treat diabetes in cats. J Vet Pharmacol Ther. 2018 Apr;41(2):266-273.

[2]. Meier A, et al. The sodium-glucose co-transporter 2 inhibitor velagliflozin reduces hyperinsulinemia and prevents laminitis in insulin-dysregulated ponies. PLoS One. 2018 Sep 13;13(9):e0203655.

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