

Canagliflozin

Catalog No: tcsc0522



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg



Specifications

CAS No:

842133-18-0

Formula:

$C_{24}H_{25}FO_5S$

Pathway:

Membrane Transporter/Ion Channel

Target:

SGLT

Purity / Grade:

>98%

Solubility:

DMSO : ≥ 50 mg/mL (112.48 mM)

Alternative Names:

JNJ 24831754ZAE;JNJ 28431754;JNJ 28431754AAA;TA 7284

Observed Molecular Weight:

444.52

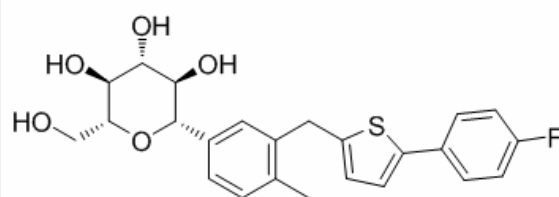
Product Description

Canagliflozin is a selective **SGLT2** inhibitor with **IC₅₀** of 2 nM, 3.7 nM, and 4.4 nM for mSGLT2, rSGLT2, and hSGLT2 in CHOK cells, respectively.

IC50 & Target: IC50: 2/3.7/4.4 nM (m/r/hSGLT2, in CHOK cells)^[1]

In Vitro: Canagliflozin is a sodium glucose co-transporter (SGLT) 2 inhibitor. In a concentration-dependent fashion, Canagliflozin inhibits Na⁺-dependent ¹⁴C-AMG uptake in CHO-hSGLT2 cells, with an IC₅₀ of 4.4±1.2 nM. Similar IC₅₀ values are obtained in CHO-rSGLT2 and CHO-mSGLT2 cells (IC₅₀=3.7 and 2.0 nM for rat and mouse SGLT2, respectively). Canagliflozin inhibits ¹⁴C-AMG uptake in CHO-hSGLT1 and mSGLT1 cells with IC₅₀ of 684±159 nM and >1,000 nM, respectively. At 10 μM, Canagliflozin inhibits the facilitative (non-Na⁺-linked) GLUT-mediated 3H-2-DG uptake in L6 myoblasts by less than 50%^[1].

In Vivo: Canagliflozin treatment (1 mg/kg) notably lowers renal threshold for glucose excretion (RT_G) in Zucker diabetic fatty (ZDF) rats to 94±10 mg/dL. In the second study, an insulin infusion is given to lower blood glucose (BG) to approximately 25 mg/dL, and then the graded glucose infusion (GGI) is given to slowly raise BG to approximately 300 mg/dL. In ZDF rats treated with Canagliflozin (1 mg/kg), the relationship between BG and urinary glucose excretion (UGE) remains well-described by a threshold relationship with negligible UGE occurring when BG^[1].



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