Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

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

Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Product Description

Canagliflozin is a selective **SGLT2** inhibitor with **IC_{50}** 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 ^{14}C-AMG uptake in CHO-hSGLT2 cells, with an IC_{50} of 4.4±1.2 nM. Similar IC_{50} values are obtained in CHO-rSGLT2 and CHO-mSGLT2 cells (IC_{50}=3.7 and 2.0 nM for rat and mouse SGLT2, respectively). Canagliflozin inhibits ^{14}C-AMG uptake in CHO-hSGLT1 and mSGLT1 cells with IC_{50} 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].