

# Canagliflozin

Catalog No: tcsc0522

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

**Size:** 100mg

**Specifications** 

#### CAS No:

842133-18-0

#### Formula:

 $\mathsf{C_{24}H_{25}FO_5S}$ 

### Pathway:

Membrane Transporter/Ion Channel

# Target:

SGLT

## Purity / Grade:

>98%

#### Solubility:

DMSO :  $\geq$  50 mg/mL (112.48 mM)

## **Alternative Names:**

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

## **Observed Molecular Weight:**

444.52

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# **Product Description**

Canagliflozin is a selective SGLT2 inhibitor with IC<sub>50</sub> 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)<sup>[1]</sup>

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

In Vivo: Canagliflozin treatment (1 mg/kg) notably lowers renal threshold for glucose excretion (RT<sub>G</sub>) 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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