Product Datasheet

BMS5121458

Catalog No. **BP-02074** · CAS **461432-26-8** · Form **free base** · Physical state **other** · Color **white to off-white** · Version **1.0** · Revision **2026-09-09**

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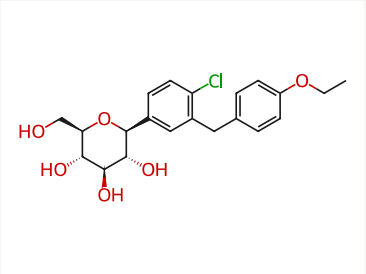
Target	Research area
SGLT	**Metabolic Disease; Cancer**

Molecular formula	**$C_{21}H_{25}ClO_6$**
Molecular weight	**408.8730**

STRUCTURE



DESCRIPTION

BMS512148 (Dapagliflozin) is a potent, selective renal sodium-dependent glucose cotransporter 2 (SGLT2) inhibitor.

BIOLOGICAL ACTIVITY

In Vitro

Dapagliflozin (0-10 μM□ 24 hours) significantly increases the cell survival in hypoxic HK2 cell in a dose-dependent manner.

Dapagliflozin (0-10 μM□ 2 hours) increases the HIF1 expression, increases AMPK and EKR phosphorylation in hypoxic HK2 cells, but shows no effect on the phosphorylation of AMPK and ERK in normoxic HK2 cells.

In Vivo

Dapagliflozin (oral administration; 10 mg/kg) causes a marked increase in urinary glucose in SGLT2i-mice, suppresses BAT thermogenesis by reducing sympathetic nerve activity and enhances hepatic gluconeogenesis and glycogenolysis.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Pedersen MG, et al. Dapagliflozin stimulates glucagon secretion at high glucose: experiments and mathematical simulations of human A-cells. Sci Rep. 2016 Aug 18;6:31214.

[2]. Chiba Y, et al. Dapagliflozin, a Sodium-Glucose Co-Transporter 2 Inhibitor, Acutely Reduces Energy Expenditure in BAT via Neural Signals in Mice. PLoS One. 2016 Mar 10;11(3):e0150756.

[3]. Chang YK, et al. Dapagliflozin, SGLT2 Inhibitor, Attenuates Renal Ischemia-Reperfusion Injury. PLoS One. 2016 Jul 8;11(7):e0158810.

[4]. Meng, Wei et al. Discovery of dapagliflozin: a potent, selective renal sodium-dependent glucose cotransporter 2 (SGLT2) inhibitor for the treatment of type 2 diabetes. Journal of medicinal chemistry vol. 51,5 (2008): 1145-9.

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