Product Datasheet

Ipragliflozin

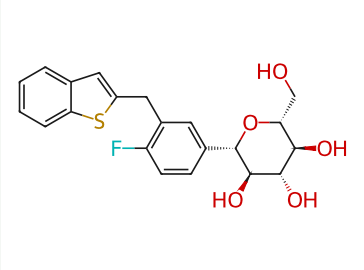
Catalog No. **BP-02083** · CAS **761423-87-4** · Form **free base** · Physical state **solid** · Color **white to off-white** · Version **1.0** · Revision **2026-11-12**

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Target	Research area
SGLT	**Metabolic Disease**

Molecular formula	**$C_{21}H_{21}FO_5S$**
Molecular weight	**404.4520**

STRUCTURE



DESCRIPTION

Ipragliflozin (ASP1941) is an orally active and selective SGLT2 inhibitor with IC50s of 7.38 and 1876 nM, 6.73 and 1166 nM, 5.64 and 1380 nM for human SGLT2 and SGLT1, rat SGLT2 and SGLT1, mouse SGLT2 and SGLT1, respectively. Antidiabetic agent.

BIOLOGICAL ACTIVITY

In Vitro

Ipragliflozin (1-50 μM) significantly and dose-dependently suppresses the growth of MCF-7 human breast cancer cell lines.

Upon knocking down SGLT2 expression using siRNA, the attenuation of cell proliferation induced by Ipragliflozin is completely canceled, suggesting that Ipragliflozin attenuates breast cancer cell proliferation through SGLT2 inhibition.

BrdU assay revealed that Ipragliflozin at a high dose (50 and 100 μM) significantly inhibits DNA synthesis of MCF-7 cells.

In Vivo

Ipragliflozin shows antihyperglycemic effect. Ipragliflozin (0.1-1 mg/kg) dose-dependently inhibits increases in blood glucose levels. In STZ-induced type 1 diabetic rats, this effect is significant at doses of 0.3 and 1 mg/kg, and in KK-Ay type 2 diabetic mice, the effect is significant at all tested doses.

Ipragliflozin (0.3 and 1 mg/kg) shows antidiabetic effects of repeated administration in streptozotocin-induced type 1 diabetic rats.

SOLUBILITY

Soluble in DMSO

REFERENCES

[1]. Atsuo Tahara, et al. Pharmacological profile of ipragliflozin (ASP1941), a novel selective SGLT2 inhibitor, in vitro and in vivo. Naunyn Schmiedebergs Arch Pharmacol. 2012 Apr;385(4):423-36.

[2]. Shiho Komatsu, et al. SGLT2 inhibitor ipragliflozin attenuates breast cancer cell proliferation. Endocr J. 2020 Jan 28;67(1):99-106.