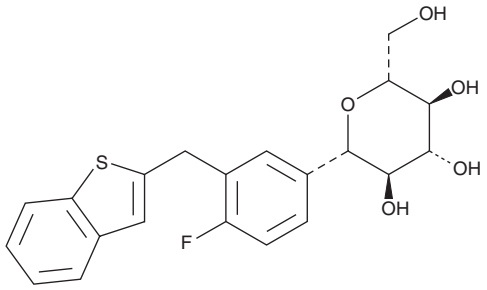
PRODUCT INFORMATION

Ipragliflozin

Item No. 22287

CAS Registry No.:	761423-87-4
Formal Name:	(1S)-1,5-anhydro-1-C-[3-(benzo[b]thien-2-ylmethyl)-4-fluorophenyl]-D-glucitol
Synonym:	ASP1941
MF:	$C_{21}H_{21}FO_5S$
FW:	404.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 231, 267 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Ipragliflozin is supplied as a crystalline solid. A stock solution may be made by dissolving the ipragliflozin in the solvent of choice. Ipragliflozin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of ipragliflozin in these solvents is approximately 30 mg/ml.

Ipragliflozin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ipragliflozin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Ipragliflozin has a solubility of approximately 0.13 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Ipragliflozin is a sodium-glucose cotransporter 2 (SGLT2) inhibitor (IC_{50} = 7.4 nM in CHO cells expressing the human cotransporter).[1] It is selective for SGLT2 over SGLT1, SGLT3, SGLT4, SGLT5, and SGLT6 (IC_{50}s = 1.9, 30.4, 15.9, 0.46, and 10.4 µM, respectively). Ipragliflozin (0.1-3 mg/kg) decreases plasma levels of insulin and glucose in an oral glucose tolerance test in a mouse model of diabetes induced by high-fat diet, streptozotocin (STZ; Item No. 13104), and nicotinamide (Item No. 11127).[2] It decreases plasma and hepatic IL-6, TNF-α, chemokine (C-C motif) ligand 2 (CCL2), and C-reactive protein (CRP) levels in the same model when administered at a dose of 3 mg/kg per day for 28 days.

References

1. Takasu, T., Yokono, M., Tahara, A., *et al.* *In vitro* pharmacological profile of ipragliflozin, a sodium glucose co-transporter 2 inhibitor. *Biol. Pharm. Bull.* **42(3)**, 507-511 (2019).
2. Tahara, A., Kurosaki, E., Yokono, M., *et al.* Effects of SGLT2 selective inhibitor ipragliflozin on hyperglycemia, hyperlipidemia, hepatic steatosis, oxidative stress, inflammation, and obesity in type 2 diabetic mice. *Eur. J. Pharmacol.* **715(1-3)**, 246-255 (2013).

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