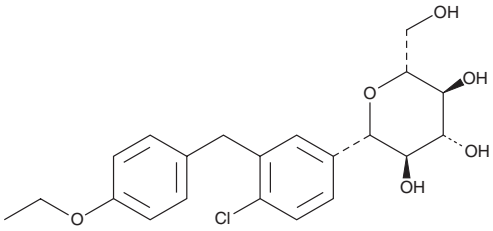
PRODUCT INFORMATION

Dapagliflozin

Item No. 11574

CAS Registry No.:	461432-26-8
Formal Name:	(1S)-1,5-anhydro-1-C-[4-chloro-3-[(4-ethoxyphenyl)methyl]phenyl]-D-glucitol
Synonym:	BMS-512148
MF:	$C_{21}H_{25}ClO_6$
FW:	408.9
Purity:	≥98%
UV/Vis.:	λ_{max}: 224, 277 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

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

Dapagliflozin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, dapagliflozin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Dapagliflozin has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Dapagliflozin is an inhibitor of sodium-glucose transporter 2 (SGLT2; IC_{50}s = 1.12 and 3 nM for the human and rat enzymes, respectively).[1] It is selective for SGLT2 over SGLT1 (IC_{50}s = 1,391 and 620 nM for the human and rat enzymes, respectively) and human adipocyte glucose transporter (GLUT) activity at 20 µM. Dapagliflozin (0.1 and 1 mg/kg) increases urinary glucose levels in normal and Zucker diabetic rats. It decreases fasting and fed plasma glucose levels in Zucker diabetic rats when administered at doses of 0.01, 0.1, and 1 mg/kg.

Reference

1. Han, S., Hagan, D.L., Taylor, J.R., *et al.* Dapagliflozin, a selective SGLT2 inhibitor, improves glucose homeostasis in normal and diabetic rats. *Diabetes* **57(6)**, 1723-1729 (2008).

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