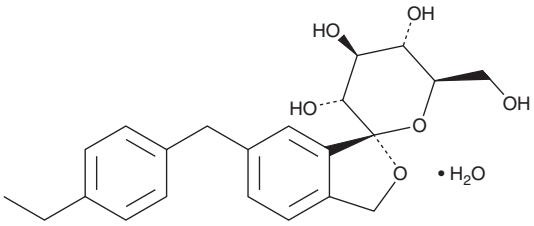
PRODUCT INFORMATION

Tofogliflozin (hydrate)

Item No. 23509

CAS Registry No.:	1201913-82-7
Formal Name:	(1S,3'R,4'S,5'S,6'R)-6-[(4-ethylphenyl)methyl]-3',4',5',6'-tetrahydro-6'-(hydroxymethyl)-spiro[isobenzofuran-1(3H),2'-[2H]pyran]-3',4',5'-triol, monohydrate
MF:	$C_{22}H_{26}O_6 \bullet H_2O$
FW:	404.5
Purity:	≥95%
UV/Vis.:	λ_{max}: 275 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

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

Tofogliflozin (hydrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tofogliflozin (hydrate) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Tofogliflozin (hydrate) has a solubility of approximately 0.05 mg/ml in a 1:20 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tofogliflozin is a potent inhibitor of sodium glucose cotransporter 2 (SGLT2) with K_i values of 2.9, 14.9, and 6.4 nM for human, rat, and mouse SGLT2, respectively.[1] It is selective for SGLT2 (IC_{50} = 2.9 nM) over other SGLTs (IC_{50}s = >1,500 nM for SGLT1 and 3-6). Tofogliflozin (3-10 mg/kg) reduces plasma glucose concentrations and increases renal glucose clearance in Zucker diabetic fatty rats in a dose-dependent manner. It also reduces hyperglycemia in non-fasted *db/db* mice and decreases postprandial hyperglycemia in GK rats, a non-obese model of type 2 diabetes with glucose intolerance.

Reference

1. Suzuki, M., Honda, K., Fukazawa, M., *et al.* Tofogliflozin, a potent and highly specific sodium/glucose cotransporter 2 inhibitor, improves glycemic control in diabetic rats and mice. *J. Pharmacol. Exp. Ther.* **341(3)**, 692-701 (2012).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM