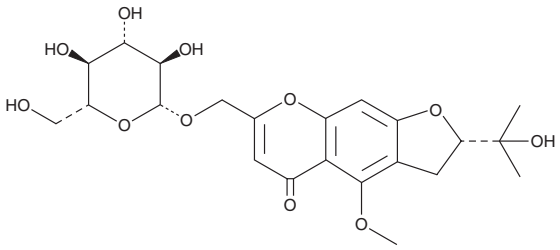
PRODUCT INFORMATION

Prim-O-Glucosylcimifugin

Item No. 34921

CAS Registry No.:	80681-45-4
Formal Name:	(2S)-7-[(β-D-glucopyranosyloxy) methyl]-2,3-dihydro-2-(1-hydroxy-1-methylethyl)-4-methoxy-5H-furo[3,2-g][1]benzopyran-5-one
Synonyms:	1''-O-Glucosylcimifugin, PGCN
MF:	$C_{22}H_{28}O_{11}$
FW:	468.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 215, 292 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Cimicifugae rhizoma*



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

Laboratory Procedures

Prim-O-glucosylcimifugin is supplied as a solid. A stock solution may be made by dissolving the prim-O-glucosylcimifugin in the solvent of choice, which should be purged with an inert gas. Prim-O-glucosylcimifugin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of prim-O-glucosylcimifugin in these solvents is approximately 15 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of prim-O-glucosylcimifugin can be prepared by directly dissolving the solid in aqueous buffers. The solubility of prim-O-glucosylcimifugin in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Prim-O-glucosylcimifugin is a chromone that has been found in *Cimicifuga dahurica* and has diverse biological activities.[1-4] It inhibits the proliferation of EGF-stimulated MCF-7 breast cancer cells when used at a concentration of 10 µM.[1] Prim-O-glucosylcimifugin (15, 50, and 100 µg/ml) reduces LPS-induced increases in the production of nitric oxide (NO), TNF-α, IL-6, and IL-1β in RAW 264.7 macrophages.[2] It decreases pulmonary edema in a mouse model of LPS-induced acute lung injury when administered at doses ranging from 2.5 to 10 mg/kg.[3] Prim-O-glucosylcimifugin inhibits formalin-induced tonic pain in rats (ED_{50} = 1.6 mg/animal).[4]

References

1. Huyan, C.T.T., Luyen, B.T.T., Khan, G.J., *et al.* Chemical constituents from *Cimicifuga dahurica* and their anti-proliferative effects on MCF-7 breast cancer cells. *Molecules* **23(5)**, 1083 (2018).
2. Zhou, J., Sun, Y.-Y., Sun, M.-Y., *et al.* Prim-O-glucosylcimifugin attenuates lipopolysaccharideinduced inflammatory response in RAW 264.7 macrophages. *Pharmacogn. Mag.* **13(51)**, 378-384 (2017).
3. Chen, N., Wu, Q., Chi, G., *et al.* Prime-O-glucosylcimifugin attenuates lipopolysaccharide-induced acute lung injury in mice. *Int. Immunopharmacol.* **16(2)**, 139-147 (2013).
4. Wu, L.-Q., Li, Y., Li, Y.-Y., *et al.* Antinociceptive effects of prim-O-glucosylcimifugin in inflammatory nociception via reducing spinal COX-2. *Biomol. Ther. (Seoul)* **24(4)**, 418-425 (2016).

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