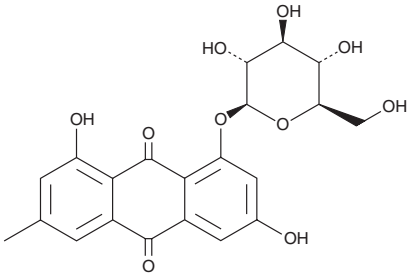
PRODUCT INFORMATION

Emodin 8-glucoside

Item No. 34474

CAS Registry No.:	23313-21-5
Formal Name:	1-(β-D-glucopyranosyloxy)-3,8-dihydroxy-6-methyl-9,10-anthracenedione
Synonyms:	Emodin 8-O-β-D-glucopyranoside, Emodin 8-β-D-glucoside, NSC 257449
MF:	$C_{21}H_{20}O_{10}$
FW:	432.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 224, 283 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Rhei Radix Et Rhizoma*



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

Laboratory Procedures

Emodin 8-glucoside is supplied as a solid. A stock solution may be made by dissolving the emodin-8-glucoside in the solvent of choice, which should be purged with an inert gas. Emodin 8-glucoside is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of emodin 8-glucoside in these solvents is approximately 30 and 25 mg/ml, respectively.

Emodin 8-glucoside is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, emodin 8-glucoside should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Emodin 8-glucoside has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Emodin 8-glucoside is an anthraquinone glycoside that has been found in *R. japonica* and has diverse biological activities.[1-4] It inhibits the activities of rat lens aldose reductase and human DNA topoisomerase II (IC_{50}s = 14.4 and 66 µM, respectively, in cell-free assays).[1,2] Emodin 8-glucoside (1 ng/ml) promotes the proliferation and differentiation of mouse MC3T3-E1 osteoblastic cells.[3] It also decreases infarct size in a rat model of focal cerebral ischemia and reperfusion injury when administered at a dose of 5 mg/kg.[4]

References

1. Kim, J.M., Jamg, D.S., Lee, Y.M., *et al.* Constituents of the fruits of *Rumex japonicus* with inhibitory activity on aldose reductase. *J. Appl. Biol. Chem.* **51(1)**, 13-16 (2008).
2. Hwangbo, K., Zheng, M.S., Kim, Y.-J., *et al.* Inhibition of DNA topoisomerases I and II of compounds from *Reynoutria japonica*. *Arch. Pharm. Res.* **35(9)**, 1583-1589 (2012).
3. Xiang, M.-X., Xu, Z., Su, H.-W., *et al.* Emodin-8-O-β-D-glucoside from *Polygonum amplexicaule D. Don var. sinense* Forb. promotes proliferation and differentiation of osteoblastic MC3T3-E1 cells. *Molecules* **16(1)**, 728-737 (2011).
4. Wang, C., Zhang, D., Ma, H., *et al.* Neuroprotective effects of emodin-8-*O*-β-D-glucoside *in vivo* and *in vitro*. *Eur. J. Pharmacol.* **577(1-3)**, 58-63 (2007).

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