

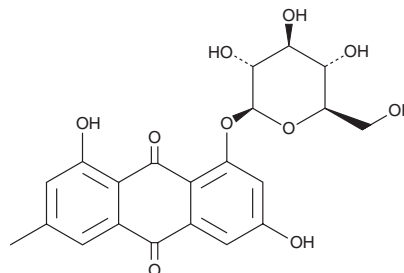
# PRODUCT INFORMATION



## 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<sub>21</sub>H<sub>20</sub>O<sub>10</sub>  
**FW:** 432.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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.<sup>1-4</sup> It inhibits the activities of rat lens aldose reductase and human DNA topoisomerase II (IC<sub>50</sub>s = 14.4 and 66 μM, respectively, in cell-free assays).<sup>1,2</sup> Emodin 8-glucoside (1 ng/ml) promotes the proliferation and differentiation of mouse MC3T3-E1 osteoblastic cells.<sup>3</sup> 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.<sup>4</sup>

### 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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