

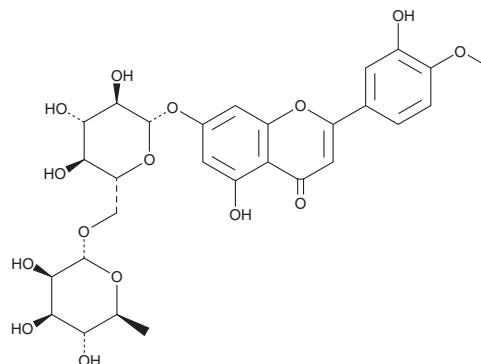
# PRODUCT INFORMATION



## Diosmin

Item No. 19848

**CAS Registry No.:** 520-27-4  
**Formal Name:** 7-[[6-O-(6-deoxy- $\alpha$ -L-mannopyranosyl)- $\beta$ -D-glucopyranosyl]oxy]-5-hydroxy-2-(3-hydroxy-4-methoxyphenyl)-4H-1-benzopyran-4-one  
**Synonym:** 3',5,7-Trihydroxy-4'-methoxyflavone 7-rutinoside  
**MF:** C<sub>28</sub>H<sub>32</sub>O<sub>15</sub>  
**FW:** 608.5  
**Purity:**  $\geq$ 90%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 257, 355 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Synthetic



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

### Laboratory Procedures

Diosmin is supplied as a crystalline solid. A stock solution may be made by dissolving the diosmin in the solvent of choice. Diosmin is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of diosmin in these solvents is approximately 2 and 0.11 mg/ml, respectively.

Diosmin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, diosmin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Diosmin has a solubility of approximately 0.20 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Diosmin is a flavonoid that has been found in citrus fruits and has diverse biological activities.<sup>1-5</sup> It inhibits LPS-induced production of prostaglandin E<sub>2</sub> (PGE<sub>2</sub>; Item No. 14010), nitric oxide (NO), IL-12, IL-6, and TNF- $\alpha$  in RAW 264.7 macrophages when used at concentrations ranging from 10 to 50  $\mu$ M.<sup>1</sup> Diosmin (100 mg/kg) reduces gastric ulcer area and leukocyte invasion in a rat model of ethanol-induced gastric injury.<sup>2</sup> It decreases lung malondialdehyde (MDA) levels, increases lung glutathione (GSH) levels and catalase activity, and reduces fibrosis in a mouse model of paraquat-induced lung injury.<sup>3</sup> Diosmin (50 and 100 mg/kg) increases the time spent in the goal quarter in a spatial memory test and reverses hippocampal dentate gyrus long term potentiation impairments in a rat model of scopolamine-induced cognitive impairment.<sup>4</sup> It also reduces mechanical and thermal hyperalgesia in a rat model of neuropathic pain induced by chronic constriction injury.<sup>5</sup>

### References

1. Berkoz, M. *Gen. Physiol. Biophys.* **38(4)**, 135-324 (2019).
2. Arab, H.H., Salama, S.A., Omar, H.A., et al. *PLoS One.* **10(3)**, e0122417 (2015).
3. Mirzaee, S., Mansouri, E., Shirani, M., et al. *Environ. Sci. Pollut. Res. Int.* **26(36)**, 36468-36477 (2019).
4. Shabani, S. and Mirshekar, M.A. *Biomed. Pharmacother.* **108**, 1376-1383 (2018).
5. Carballo-Villalobos, A.I., González-Trujano, M.E., Pellicer, F., et al. *Biomed. Pharmacother.* **97**, 310-320 (2018).

#### 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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#### 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