

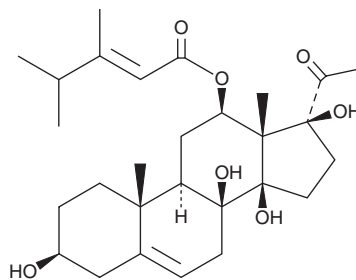
# PRODUCT INFORMATION



## Caudatin

Item No. 34585

**CAS Registry No.:** 38395-02-7  
**Formal Name:** (3 $\beta$ ,12 $\beta$ ,14 $\beta$ ,17 $\alpha$ )-12-[[[(2E)-3,4-dimethyl-1-oxo-2-pentenyl]oxy]-3,8,14,17-tetrahydroxy-pregn-5-en-20-one  
**MF:** C<sub>28</sub>H<sub>42</sub>O<sub>7</sub>  
**FW:** 490.6  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 220 nm  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:**  $\geq$ 4 years  
**Item Origin:** Plant/*Cynanchum otophyllum*



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

### Laboratory Procedures

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

Caudatin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, caudatin should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Caudatin has a solubility of approximately 0.12 mg/ml in a 1:7 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Caudatin is a C-21 steroid that has been found in *C. auriculatum* and has anticancer activity.<sup>1,2</sup> It is cytotoxic to SMMC-7721, MCF-7, and HeLa cells (IC<sub>50</sub>s = 24.95, 65.82, and 247.54  $\mu$ M, respectively).<sup>1</sup> Caudatin (50-300  $\mu$ M) induces apoptosis in and inhibits mammosphere formation by MDA-MB-231 breast cancer cells, as well as decreases the number of cancer stem cells (CSCs) in the MDA-MB-231 cell population.<sup>2</sup> *In vivo*, caudatin (10 mg/kg) reduces tumor volume in an MDA-MB-231 mouse xenograft model.

### References

1. Peng, Y.-r., Li, Y.-b., Liu, X.-d., *et al.* Antitumor activity of C-21 steroidal glycosides from *Cynanchum auriculatum* Royle ex Wight. *Phytomedicine* **15(11)**, 1016-1020 (2008).
2. Zhen, X., Choi, H.S., Kim, J.-H., *et al.* Caudatin isolated from *Cynanchum auriculatum* inhibits breast cancer stem cell formation via a GR/YAP signaling. *Biomolecules* **10(6)**, 925 (2020).

#### 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