

PRODUCT INFORMATION

Oxypaeoniflorin

Item No. 42363

CAS Registry No.: 39011-91-1

Formal Name: (1aR,2S,3aR,5R,5aR,5bS)-tetrahydro-5-hydroxy-5b-[[[4-(4-hydroxybenzoyl)oxy]methyl]-2-methyl-2,5-methano-1H-3,4-dioxacyclobuta[cd]pentalen-1a(2H)-yl, β-D-glucopyranoside

Synonyms: NSC 258310, Oxypaeoniflora

MF: C₂₃H₂₈O₁₂

FW: 496.5

Purity: ≥98%

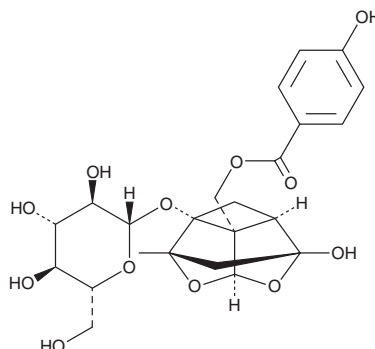
Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Item Origin: Plant/*Paeonia lactiflora*

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



Laboratory Procedures

Oxypaeoniflorin is supplied as a solid. A stock solution may be made by dissolving the oxypaeoniflorin in the solvent of choice, which should be purged with an inert gas. Oxypaeoniflorin is soluble in organic solvents such as ethanol and DMSO. Oxypaeoniflorin is sparingly soluble (1-10 mg/ml) in ethanol and soluble (≥10 mg/ml) in DMSO.

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 oxypaeoniflorin can be prepared by directly dissolving the solid in aqueous buffers. Oxypaeoniflorin is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Oxypaeoniflorin is a monoterpenoid glycoside that has been found in *P. lactiflora* and has diverse biological activities.¹⁻³ It scavenges DPPH (Item No. 14805) radicals in a cell-free assay when used at concentrations of 800 and 1,000 µg/ml and inhibits LPS-induced nitric oxide (NO) production in RAW 264.7 macrophages at 250 µg/ml.¹ Oxypaeoniflorin (10-40 mg/kg) decreases serum creatine kinase-MB (CK-MB), cardiac troponin I (CTnI), and cardiac troponin T (CTnT) levels and increases ejection fraction and fractional shortening in a mouse model of myocardial ischemia-reperfusion injury induced by left anterior descending coronary artery ligation.² It increases survival and decreases lung inflammation severity scores and immune cell bronchoalveolar lavage fluid (BALF) infiltration in a mouse model of LPS-induced acute lung injury when administered at a dose of 40 mg/kg.³

References

- Kim, S.-A., Jang, E.-S., Lee, A.-Y., et al. Anti-inflammatory and anti-oxidant effects of oxypaeoniflorin, paeoniflorin and *Paeonia lactiflora* cv. 'Red Charm' flower petal extracts in macrophage cells. *Korean J. Plant Res.* **33**(3), 153-162 (2020).
- Wang, K., and Hu, W. Oxypaeoniflorin improves myocardial ischemia/reperfusion injury by activating the Sirt1/Foxo1 signaling pathway. *Acta Biochim. Pol.* **67**(2), 239-245 (2020).
- Guohua, F., Tieyuan, Z., Rui, W., et al. Oxypaeoniflorin prevents acute lung injury induced by lipopolysaccharide through the PTEN/AKT pathway in a Sirt1- dependent manner. *Oxid. Med. Cell. Longev.* 6878026 (2021).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 06/25/2025

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