

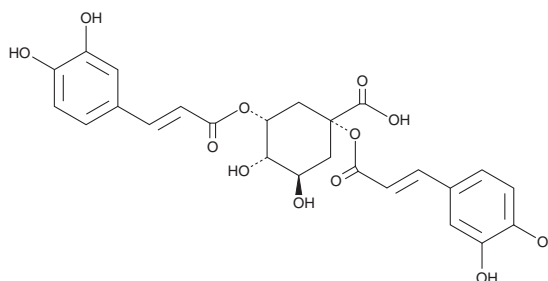
PRODUCT INFORMATION



1,3-Dicaffeoylquinic Acid

Item No. 25022

CAS Registry No.: 30964-13-7
Formal Name: (1R,3R,4S)-1,3-bis[[3-(3,4-dihydroxyphenyl)-1-oxo-2-propen-1-yl]oxy]-4,5R-dihydroxycyclohexanecarboxylic acid
Synonyms: 1,3-DCQA, 1,3-Dicaffeoylquinic Acid
MF: C₂₅H₂₄O₁₂
FW: 516.5
Purity: ≥98%
UV/Vis.: λ_{max}: 222, 248, 326 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

1,3-Dicaffeoylquinic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,3-dicaffeoylquinic acid in the solvent of choice. 1,3-Dicaffeoylquinic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 1,3-dicaffeoylquinic acid in these solvents is approximately 0.2, 5, and 2 mg/ml, respectively.

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 1,3-dicaffeoylquinic acid can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 1,3-dicaffeoylquinic acid in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

1,3-Dicaffeoylquinic acid is a polyphenol that has been found in *C. scolymus*.¹ It decreases the expression and protein levels of inducible nitric oxide synthase (iNOS) when used at a concentration of 10 μM in human coronary artery smooth muscle cells (HCASMCs) treated with a cytokine mixture.² 1,3-Dicaffeoylquinic acid decreases protein levels of tyrosinase and microphthalmia-associated transcription factor (MITF) in B16F1 murine melanocytes.³ It inhibits melanogenesis in B16F1 cells and decreases tyrosinase activity in cell lysates when used at a concentration of 25 μM.¹ 1,3-Dicaffeoylquinic acid (20 and 40 μM) reduces triglyceride levels in sodium oleate-induced hyperlipidemic HepG2 cells compared to hyperlipidemic control cells.

References

1. Chen, Y., Chen, X., Luo, G., *et al.* Discovery of potential inhibitors of squalene synthase from traditional chinese medicine based on virtual screening and *in vitro* evaluation of lipid-lowering effect. *Molecules* **23**(5), E1040 (2018).
2. Xia, N., Pautz, A., Wollscheid, U., *et al.* Artichoke, cynarin and cyanidin downregulate the expression of inducible nitric oxide synthase in human coronary smooth muscle cells. *Molecules* **19**(3), 3654-3668 (2014).
3. Ha, J.H. and Park, S.N. Mechanism underlying inhibitory effect of six dicaffeoylquinic acid isomers on melanogenesis and the computational molecular modeling studies. *Bioorg. Med. Chem.* **26**(14), 4201-4208 (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.

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, 11/30/2022

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