

PRODUCT INFORMATION



1,4-Dicaffeoylquinic Acid

Item No. 33842

CAS Registry No.: 1182-34-9
Formal Name: (1 α ,3R,4 α ,5R)-*rel*-1,4-bis[[3-(3,4-dihydroxyphenyl)-1-oxo-2-propen-1-yl]oxy]-3,5-dihydroxycyclohexanecarboxylic acid

Synonyms: 1,4-DCQA,
1,4-Dicaffeoylquinic Acid

MF: C₂₅H₂₄O₁₂

FW: 516.5

Purity: \geq 98%

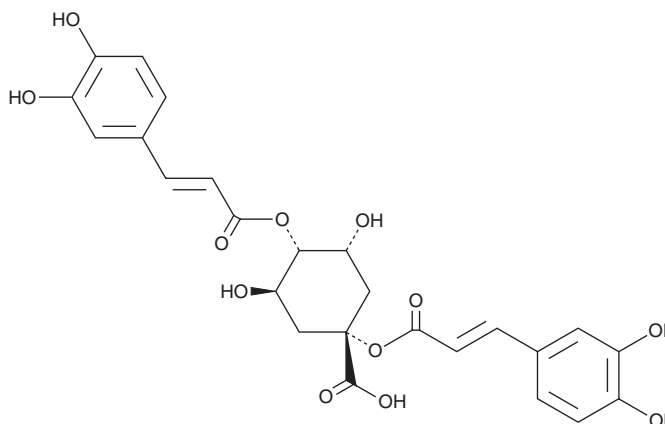
UV/Vis.: λ_{max} : 220, 246, 330 nm

Supplied as: A solid

Storage: -20°C

Stability: \geq 4 years

Item Origin: Plant/*Lonicera japonica* Thunb.



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

Laboratory Procedures

1,4-Dicaffeoylquinic acid is supplied as a solid. A stock solution may be made by dissolving the 1,4-dicaffeoylquinic acid in the solvent of choice, which should be purged with an inert gas. 1,4-Dicaffeoylquinic acid is soluble in DMSO.

Description

1,4-Dicaffeoylquinic acid is a polyphenol that has been found in *C. coronarium* and has diverse biological activities.¹⁻⁴ It scavenges DPPH (Item No. 14805) radicals and inhibits xanthine oxidase (XO; IC₅₀ = 7.36 μ M).^{1,2} 1,4-Dicaffeoylquinic acid (25 μ M) decreases protein levels of tyrosinase and microphthalmia-associated transcription factor (MITF) in B16/F1 murine melanocytes, inhibits melanogenesis in the same cells, and decreases tyrosinase activity in B16/F1 cell lysates.³ It increases biliary flow in rats in a dose-dependent manner.⁴

References

1. Alberati, D., Moreau, J.-L., Lengyel, J., *et al.* Glycine reuptake inhibitor RG1678: A pharmacologic characterization of an investigational agent for the treatment of schizophrenia. *Neuropharmacology* **62**(2), 1152-1161 (2012).
2. Cao, W., Fang, Y., Wu, T., *et al.* Insights from multispectral and molecular docking investigation on the xanthine oxidase inhibition by 1,4-dicaffeoylquinic acid. *J. Mol. Struct.* **1219**, 128475 (2020).
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).
4. Preziosi, P., Loscalzo, B., and Marmo, E. Comparison of choleric effects of CYN and Na-dehydrocholate. *Experientia* **15**(4), 135-138 (1959).

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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