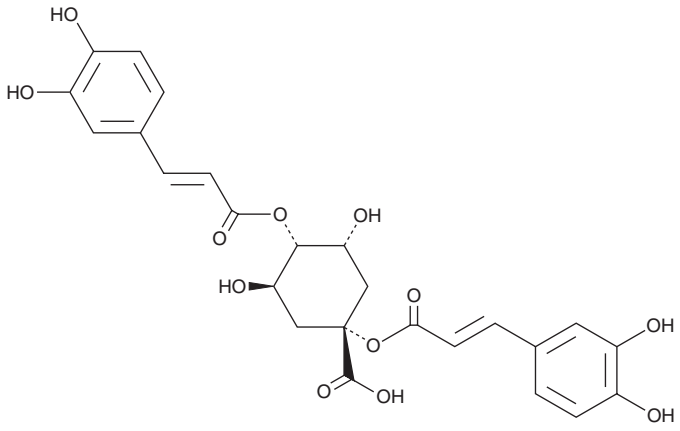
PRODUCT INFORMATION

1,4-Dicaffeoylquinic Acid

Item No. 33842

CAS Registry No.:	1182-34-9
Formal Name:	(1α,3R,4α,5R)-*rel*-1,4-*bis*[[3-(3,4-dihydroxyphenyl)-1-oxo-2-propen-1-yl]oxy]-3,5-dihydroxy-cyclohexanecarboxylic acid
Synonyms:	1,4-DCQA, 1,4-Dicaffeylquinic Acid
MF:	$C_{25}H_{24}O_{12}$
FW:	516.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 220, 246, 330 nm
Supplied as:	A solid
Storage:	-20°C
Stability:	≥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; IC_{50} = 7.36 µM).[1,2] 1,4-Dicaffeoylquinic acid (25 µM) 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 choleretic effects of CYN and Na-dehydrocholate. *Experientia* **15(4)**, 135-138 (1959).

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