

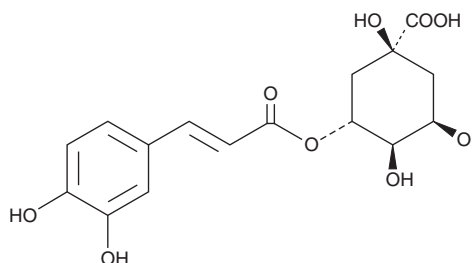
Product Information



Chlorogenic Acid

Catalog No. 70930

CAS Registry No.: 327-97-9
Formal Name: 3R-[[3-(3,4-dihydroxyphenyl)-1-oxo-2-propenyl]oxy]-1S,4R,5R-trihydroxycyclohexanecarboxylic acid
Synonyms: 3-O-Caffeoylquinic acid; Heriguard; NSC 407296
MF: C₁₆H₁₈O₉
FW: 354.3
Purity: ≥95%
Stability: ≥2 years at 4°C
Supplied as: A crystalline solid



Laboratory Procedures

For long term storage, we suggest that chlorogenic acid be stored as supplied at 4°C. It should be stable for at least two years.

Chlorogenic acid is supplied as a crystalline solid. A stock solution may be made by dissolving the chlorogenic acid in an organic solvent purged with an inert gas. Chlorogenic acid is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of chlorogenic acid in these solvents is approximately 25 mg/ml.

Organic solvent-free aqueous solutions of chlorogenic acid can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of chlorogenic acid in PBS (pH 7.2) is approximately 25 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Chlorogenic acid is a phenolic natural product isolated from the leaves and fruits of dicotyledonous plants, including the coffee bean. Structurally, chlorogenic acid is the ester of caffeic acid with the 3-hydroxyl group of quinic acid. Chlorogenic acid is an important factor in plant metabolism. It is also an antioxidant and an inhibitor of the tumor promoting activity of phorbol esters.^{1,2} Chlorogenic acid, at concentrations as high as 100 µM, did not inhibit the 5-lipoxygenase activity of ionophore-stimulated human PMNLs.³

References

- Huang, M.T., Smart, R.C., Wong, C., *et al.* Inhibitory effect of curcumin, chlorogenic acid, caffeic acid, and ferulic acid on tumor promotion in mouse skin by 12-O-tetradecanoylphorbol-13-acetate. *Cancer Res.* **48**, 5941-5946 (1988).
- Conney, A.H., Lysz, T., Ferraro, T., *et al.* Inhibitory effect of curcumin and some related dietary compounds on tumor promotion and arachidonic acid metabolism in mouse skin. *Adv. Enzyme Regul.* **31**, 385-396 (1991).
- Kimura, Y., Okuda, H., Okuda, T., *et al.* Studies on the activities of tannins and related compounds, X. Effects of caffeotannins and related compounds on arachidonate metabolism in human polymorphonuclear leukocytes. *J. Nat. Prod.* **50**, 392-399 (1987).

Related Products

Caffeic Acid - Cat. No. 70602 • 3,4-Dihydroxyphenyl ethanol - Cat. No. 70604 • Rosmarinic Acid - Cat. No. 70900 • Catechin - Cat. No. 70940 • Carnosol - Cat. No. 89800 • Cannabidiol - Cat. No. 90080

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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