

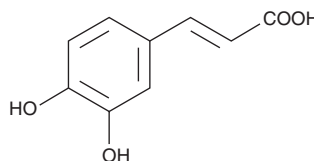
# Product Information



## Caffeic Acid

Catalog No. 70602

<b>CAS Registry No.:</b>	331-39-5
<b>Formal Name:</b>	3,4-dihydroxy cinnamic acid
<b>MF:</b>	C <sub>9</sub> H <sub>8</sub> O <sub>4</sub>
<b>FW:</b>	180.2
<b>Purity:</b>	≥97%
<b>Stability:</b>	≥2 years at room temperature
<b>Supplied as:</b>	A brown crystalline solid



### Laboratory Procedures

For long term storage, we suggest that caffeic acid be stored as supplied at room temperature. It should be stable for at least two years.

Caffeic acid is supplied as a crystalline solid. Stock solutions of caffeic acid can be prepared by dissolving the crystalline compound in the solvent of choice. Solvents such as ethanol, DMSO, or dimethyl formamide purged with an inert gas can be used. The solubility of caffeic acid in these solvents is approximately 7 mg/ml.

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. If an organic solvent-free aqueous solution is needed, it can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of caffeic acid in PBS (pH 7.2) is approximately 0.65 mg/ml. Store aqueous solutions of caffeic acid on ice and use within 12 hours of preparation. Although the aqueous solutions of caffeic acid may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Caffeic acid inhibits both 5- and 12-lipoxygenase (LO) in a dose-dependent manner.<sup>1</sup> Depending on the type of assay, the reported IC<sub>50</sub> for 5-LO inhibition is between 3.7 μM and 72 μM.<sup>1-3</sup> The inhibition of 12-LO by caffeic acid also shows variation; its IC<sub>50</sub> has been reported between 5.1 μM and 30 μM.<sup>1-3</sup>

### References

1. Koshihara, Y., Neichi, T., Murota, S., *et al.* Caffeic acid is a selective inhibitor for leukotriene biosynthesis. *Biochim. Biophys. Acta* **792**, 92-97 (1984).
2. Kohyama, N., Nagata, T., Fujimoto, S., *et al.* Inhibition of arachidonate lipoxygenase activities by 2-(3,4-dihydroxyphenyl) ethanol, a phenolic compound from Olives. *Biosci. Biotech. Biochem.* **61**, 347-350 (1997).
3. Rao, C.V., Desai, D., Simi, B., *et al.* Inhibitory effect of caffeic acid esters on azoxymethane-induced biochemical changes and aberrant crypt foci formation in rat colon. *Cancer Res.* **53**, 4182-4188 (1993).

## Cayman Chemical

### Mailing address

1180 E. Ellsworth Road  
Ann Arbor, MI  
48108 USA

### Phone

(800) 364-9897  
(734) 971-3335

### Fax

(734) 971-3640

### E-Mail

custserv@caymanchem.com

### Web

www.caymanchem.com

**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.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our **Warranty and Limitation of Remedy located on our website and in our catalog**.

Copyright Cayman Chemical Company, 01/14/2010