



# LKT Laboratories, Inc.

## Chlorogenic Acid (from *Eucommia*)

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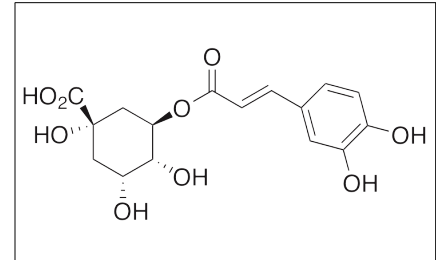
### Product Information

Product ID C2943  
CAS No. 327-97-9

#### Chemical Name

#### Synonym

Formula  $C_{16}H_{18}O_9$   
Formula Wt. 354.31  
Melting Point 207-209 °C  
Purity  $\geq 98\%$   
Solubility



**Bulk quantities available upon request**

| Product ID | Size   |
|------------|--------|
| C2943      | 250 mg |
| C2943      | 1 g    |

Store Temp Ambient  
Ship Temp Ambient

**Description** Chlorogenic acid is a polyphenol derivative of caffeic acid found in *Eucommia* bark that exhibits a wide variety of beneficial properties, including antibacterial, antioxidative, anti-inflammatory, hepatoprotective, neuroprotective, anti-allergic, anticancer chemotherapeutic, and chemopreventive activities. Chlorogenic acid alters membrane stability of bacteria such as *Staphylococcus*, and may also inhibit pepsin activity. Chlorogenic acid also prevents acetaminophen-induced liver injury, preventing activation of caspases 3 and 7 as well as phosphorylation of ERK1/2, JNK, and p38 MAPK; it also increases levels of glutathione and thioredoxin and increases activity of glutathione reductase and thioredoxin reductase, preventing oxidative stress and apoptosis in vitro. In similar in vivo models, chlorogenic acid prevents activation of NF- $\kappa$ B and decreases expression of toll-like receptor 4 (TLR4), Myd88, iNOS, COX-2, TNF- $\alpha$ , IL-6, and IL-1 $\beta$ . This compound decreases histamine release and inhibits mast cell activation, preventing systemic anaphylaxis. In vitro, chlorogenic acid inhibits dopamine oxidation and interactions between dopamine and  $\alpha$ -synuclein, indicating potential benefit in the treatment of Parkinson's disease. Additionally, this compound inhibits DNA methyltransferase (DNMT) in a noncompetitive manner and also inhibits glucose-6-phosphate translocase, decreasing expression of matrix metalloproteinase 2 (MMP2) and inhibiting glioma cell migration.

**References** Zeng HJ, Liang HL, You J, et al. Study on the binding of chlorogenic acid to pepsin by spectral and molecular docking. *Luminescence*. 2013 Dec 12. [Epub ahead of print]. PMID: 24339327.

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**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.