**Chlorogenic Acid (from *Lonicera*)**

**Product Information**

**Product ID** C2944
**CAS No.** 327-97-9

**Chemical Name**

$$15-(1\alpha,3\beta,4\alpha,5\alpha)-3\{[3-(3,4-Dihydroxyphenyl)-1-oxo-2-propenyl]oxy]-1,4,5-trihydroxycyclohexane-carboxylic acid$$

**Synonym** 3-Caffeoylquinic acid

**Formula** $C_{16}H_{18}O_{9}$

**Formula Wt.** 354.31

**Melting Point** 207-209°C (dec.)

**Purity** ≥98%

**Solubility** Soluble in ethanol or acetone.

**Store Temp** Ambient

**Ship Temp** Ambient

**Description** Chlorogenic acid is a polyphenol derivative of caffeic acid found in *Lonicera* 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 acetylcholinesterase-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 thio-redoxin and increases activity of glutathione reductase and thio-redoxin reductase, preventing oxidative stress and apoptosis in vitro. In similar in vivo models, chlorogenic acid prevents activation of NF-κB and decreases expression of toll-like receptor 4 (TLR4), myd88, COX-2, TNF-α, IL-6, and IL-1β. 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 α-synuclein, indicating potential benefit in the treatment of Parkinson’s disease. Additionally, this compound inhibits DNA methyltransferase (DNMT) in a non-competitive manner and also inhibits glucose-6-phosphate translocase, decreasing expression of matrix metalloproteinase 2 (MMP2) and inhibiting glioma cell migration.

**References**


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