



LKT Laboratories, Inc.

Chlorogenic Acid (from *Lonicera*)

Phone: 888-558-5227
651-644-8424
Fax: 888-558-7329
Email: getinfo@lktlabs.com
Web: lktlabs.com

Product Information

Product ID C2944

CAS No. 327-97-9

Chemical Name [1S-(1 α ,3 β ,4 α ,5 α)]-3-[[3-(3,4-Dihydroxyphenyl)-1-oxo-2-propenyl]oxy]-1,4,5-trihydroxycyclohexane- carboxylic acid

Synonym 3-Caffeoylquinic acid

Formula C₁₆H₁₈O₉

Formula Wt. 354.31

Melting Point 207-209° C(dec.)

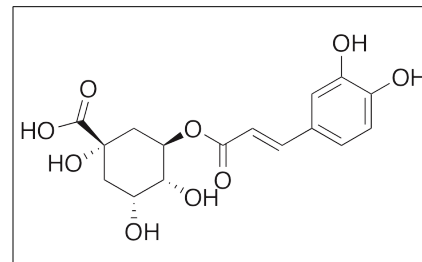
Purity ≥98%

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 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- κ B and decreases expression of toll-like receptor 4 (TLR4), myd88, iNOS, COX-2, TNF- α , IL-6, and IL-1 β . 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.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
C2944	100 mg	\$27.80
C2944	250 mg	\$42.00
C2944	1 g	\$102.00

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.

Luís A, Silva F, Sousa S, et al. Antistaphylococcal and biofilm inhibitory activities of gallic, caffeic, and chlorogenic acids. Biofouling. 2014 Jan;30(1):69-79. PMID: 24228999.

Shi H, Dong L, Jiang J, et al. Chlorogenic acid reduces liver inflammation and fibrosis through inhibition of toll-like receptor 4 signaling pathway. Toxicology. 2013 Jan 7;303:107-14. PMID: 23146752.

Teraoka M, Nakaso K, Kusumoto C, et al. Cytoprotective effect of chlorogenic acid against α -synuclein-related toxicity in catecholaminergic PC12 cells. J Clin Biochem Nutr. 2012 Sep;51(2):122-7. PMID: 22962530.

Lou Z, Wang H, Zhu S, et al. Antibacterial activity and mechanism of action of chlorogenic acid. J Food Sci. 2011 Aug;76(6):M398-403. PMID: 22417510.

Qin HD, Shi YQ, Liu ZH, et al. Effect of chlorogenic acid on mast cell-dependent anaphylactic reaction. Int Immunopharmacol. 2010 Sep;10(9):1135-41. PMID: 20620227.

Belkaid A, Currie JC, Desgagnés J, et al. The chemopreventive properties of chlorogenic acid reveal a potential new role for the microsomal glucose-6-phosphate translocase in brain tumor progression. Cancer Cell Int. 2006 Mar 27;6:7. PMID: 16566826.

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