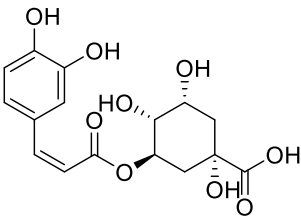


Product data sheet



MedKoo Cat#: 600122 Name: Chlorogenic Acid CAS#: 327-97-9 Chemical Formula: C ₁₆ H ₁₈ O ₉ Exact Mass: 354.09508 Molecular Weight: 354.31	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Chlorogenic acid (CGA) is a natural chemical compound which is the ester of caffeic acid and (-)-quinic acid. It is an important biosynthetic intermediate in lignin biosynthesis. This compound, known as an antioxidant, may also slow the release of glucose into the bloodstream after a meal. The term chlorogenic acids can also refer to a related family of esters of hydroxycinnamic acids (caffeic acid, ferulic acid and p-coumaric acid) with quinic acid. Chlorogenic acids contain no chlorine.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	73.67	207.93
DMF	71.0	200.39
Ethanol	48.0	135.47
PBS (pH 7.2)	25.0	70.56
Water	18.0	50.80

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.82 mL	14.11 mL	28.22 mL
5 mM	0.56 mL	2.82 mL	5.64 mL
10 mM	0.28 mL	1.41 mL	2.82 mL
50 mM	0.06 mL	0.28 mL	0.56 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Girsang E, Ginting CN, Lister INE, Gunawan KY, Widowati W. Anti-inflammatory and antiaging properties of chlorogenic acid on UV-induced fibroblast cell. PeerJ. 2021 Jul 7;9:e11419. doi: 10.7717/peerj.11419. PMID: 34277144; PMCID: PMC8272460.
- Zhang S, Sun B, Wang D, Liu Y, Li J, Qi J, Zhang Y, Bai C, Liang S. Chlorogenic Acid Ameliorates Damage Induced by Fluorene-9-Bisphenol in Porcine Sertoli Cells. Front Pharmacol. 2021 Jun 9;12:678772. doi: 10.3389/fphar.2021.678772. PMID: 34177588; PMCID: PMC8219976.

In vivo study

- Shi A, Li T, Zheng Y, Song Y, Wang H, Wang N, Dong L, Shi H. Chlorogenic Acid Improves NAFLD by Regulating gut Microbiota and GLP-1. Front Pharmacol. 2021 Jun 30;12:693048. doi: 10.3389/fphar.2021.693048. PMID: 34276380; PMCID: PMC8278021.

Product data sheet



2. Chen Q, Lei YQ, Liu JF, Wang ZC, Cao H. Beneficial effects of chlorogenic acid treatment on neuroinflammation after deep hypothermic circulatory arrest may be mediated through CYLD/NF- κ B signaling. *Brain Res.* 2021 Sep 15;1767:147572. doi: 10.1016/j.brainres.2021.147572. Epub 2021 Jun 30. PMID: 34216581.

7. Bioactivity

Biological target:

Chlorogenic acid plays several important and therapeutic roles such as antioxidant activity, antibacterial, hepatoprotective, cardioprotective, anti-inflammatory, antipyretic, neuroprotective, anti-obesity, antiviral, anti-microbial, anti-hypertension.

In vitro activity

Treating UV-induced skin fibroblast cells with CA (chlorogenic acid) decreased the level of ROS, IL-1 β , TNF- α , apoptotic cells, and necrotic cells and increased live cells and COL-3 gene expression.

Reference: *PeerJ.* 2021; 9: e11419. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8272460/>

In vivo activity

The mice in the HFD group showed significantly elevated serum transaminase, FBG, blood lipids and HOMA-IR ($p < 0.05$). After treatment with CGA (chlorogenic acid), the serum transaminase, FBG, blood lipids and HOMA-IR significantly decreased ($p < 0.05$) (Figure 2).

Reference: *Front Pharmacol.* 2021; 12: 693048. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8278021/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.