



LKT Laboratories, Inc.

Ferulic Acid

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Product Information

Product ID F1669

CAS No. 1135-24-6

Chemical Name 3-(4-Hydroxy-3-methoxyphenyl)-2-propenoic acid

Synonym Caffeic acid 3-methyl ether, 4-Hydroxy-3-methoxy- cinnamic acid

Formula C₁₀H₁₀O₄

Formula Wt. 194.18

Melting Point 168-175°C

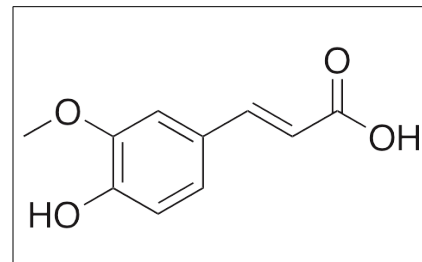
Purity ≥98%

Solubility Soluble in hot water, or ethyl acetate. DMSO: 39 mg/mL,
Ethanol: 39 mg/mL

Store Temp Ambient

Ship Temp Ambient

Description Ferulic acid is a metabolite of verbascoside and a hydroxycinnamic acid found in various plant sources that displays neuroprotective, antioxidative, anti-inflammatory, antidepressant, and antinociceptive activities. Ferulic acid decreases oxidative stress and inflammation, exhibiting therapeutic and protective effects in animal models of diabetic nephropathy. Ferulic acid protects against oxidative damage in cellular models by decreasing levels of IL-1β and TNF-α and increasing levels of superoxide dismutase and glutathione. In animal models, this compound acts as an antinociceptive and antidepressant, decreasing levels of NE, DA, 5-HT, substance P, p65, and NF-κB in the hippocampus and frontal cortex. Ferulic acid displays potential benefit in the treatment of Alzheimer's disease as well, as it reverses morphological effects induced by amyloid-β (Aβ) dimers in *Paracentrotus lividus* embryos. Additionally, ferulic acid inhibits presynaptic glutamate release from cortical synaptosomes in rats through chelation of extracellular Ca²⁺ ions.



Pricing and Availability

Bulk quantities available upon request

Product ID	Size	List Price
F1669	5 g	\$48.10
F1669	25 g	\$78.10
F1669	100 g	\$237.90

References Quirantes-Piné R, Herranz-López M, Funes L, et al. Phenylpropanoids and their metabolites are the major compounds responsible for blood-cell protection against oxidative stress after administration of Lippia citriodora in rats. *Phytomedicine*. 2013 Sep 15;20(12):1112-8. PMID: 23827667.

Xu Y, Zhang L, Shao T, et al. Ferulic acid increases pain threshold and ameliorates depression-like behaviors in reserpine-treated mice: behavioral and neurobiological analyses. *Metab Brain Dis*. 2013 Dec;28(4):571-83. PMID: 23584961.

Picone P, Nuzzo D, Di Carlo M. Ferulic acid: a natural antioxidant against oxidative stress induced by oligomeric A-beta on sea urchin embryo. *Biol Bull*. 2013 Feb;224(1):18-28. PMID: 23493505.

Lin TY, Lu CW, Huang SK, et al. Ferulic acid suppresses glutamate release through inhibition of voltage-dependent calcium entry in rat cerebrocortical nerve terminals. *J Med Food*. 2013 Feb;16(2):112-9. PMID: 23342970.

Choi R, Kim BH, Naowaboot J, et al. Effects of ferulic acid on diabetic nephropathy in a rat model of type 2 diabetes. *Exp Mol Med*. 2011 Dec 31;43(12):676-83. PMID: 21975281.

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