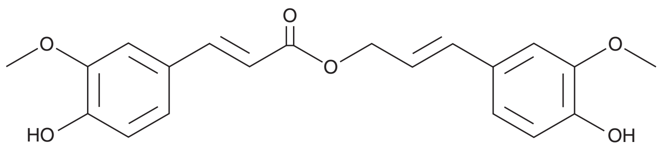
PRODUCT INFORMATION

Coniferyl Ferulate

Item No. 29620

CAS Registry No.:	63644-62-2
Formal Name:	3-(4-hydroxy-3-methoxyphenyl)-2-propenoic acid, 3-(4-hydroxy-3-methoxyphenyl)-2-propen-1-yl ester
MF:	$C_{20}H_{20}O_6$
FW:	356.4
Purity:	≥95%
UV/Vis.:	λ_{max}: 212, 271, 319 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Angelica sinensis*



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Coniferyl ferulate is supplied as a crystalline solid. A stock solution may be made by dissolving the coniferyl ferulate in the solvent of choice, which should be purged with an inert gas. Coniferyl ferulate is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of coniferyl ferulate in ethanol is approximately 3 mg/ml and approximately 20 mg/ml in DMSO and DMF.

Description

Coniferyl ferulate is a monolignol conjugate that has been found in *A. sinensis* and has diverse biological activities, including antibacterial, antioxidant, enzyme inhibitory, and neuroprotective properties.[1-4] It is active against the Gram-positive bacteria *B. subtilis* and *S. aureus*.[2] Coniferyl ferulate scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals (EC_{50} = 3.6 µg/ml) and inhibits glutathione S-transferase (GST; IC_{50} = 0.3 µM for the human placental enzyme) in cell-free assays.[3,4] Coniferyl ferulate (10 and 50 µg/ml) reduces cytotoxicity induced by amyloid-β (1-40) (Aβ40) in PC12 cells.[3]

References

1. Grabber, J.H., Schatz, P.F., Kim, H., *et al.* Identifying new lignin bioengineering targets: 1. Monolignol-substitute impacts on lignin formation and cell wall fermentability. *BMC Plant Biol.* **10**, 114 (2010).
2. Chou, S.-H., Everngam, M.C., Sturtz, G., *et al.* Antibacterial activity of components from *Lomatium californicum. Phytother. Res.* **20(2)**, 153-156 (2006).
3. Ho, C.C., Kumaran, A., and Hwang, L.S. Bio-assay guided isolation and identification of anti-Alzheimer active compounds from the root of *Angelica sinensis. Food Chem.* **114(1)**, 246-252 (2009).
4. Chen, C., Wu, C., Lu, X., *et al.* Coniferyl ferulate, a strong inhibitor of glutathione S-transferase isolated from Radix *Angelicae sinensis*, reverses multidrug resistance and downregulates P-glycoprotein. *Evid. Based Complement. Alternat. Med.* 639083 (2013).

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