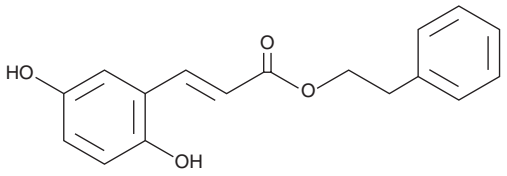
PRODUCT INFORMATION

2,5-Dihydroxycinnamic Acid phenethyl ester

Item No. 29736

CAS Registry No.: 179691-97-5
Formal Name: (2E)-3-(2,5-dihydroxyphenyl)-2-propenoic acid, 2-phenylethyl ester
MF: $C_{17}H_{16}O_4$
FW: 284.3
Purity: ≥98%
UV/Vis.: λ_{max}: 251, 280, 362 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

2,5-Dihydroxycinnamic acid phenethyl ester is supplied as a crystalline solid. A stock solution may be made by dissolving the 2,5-dihydroxycinnamic acid phenethyl ester in the solvent of choice, which should be purged with an inert gas. 2,5-Dihydroxycinnamic acid phenethyl ester is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of 2,5-dihydroxycinnamic acid phenethyl ester in these solvents is approximately 30 mg/ml.

Description

2,5-Dihydroxycinnamic acid phenethyl ester is an inhibitor of 5-lipoxygenase (5-LO) with an IC_{50} value of 0.33 µM for inhibition of 5-LO product synthesis in polymorphonuclear leukocytes (PMNLs) stimulated with the sarcoendoplasmic reticulum calcium ATPase (SERCA) inhibitor thapsigargin (Item No. 10522).[1] It scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH) radicals (IC_{50} = 16.41 µM) in a cell-free assay. 2,5-Dihydroxycinnamic acid phenethyl ester selectively decreases viability of RCC4 and 786-O cells lacking the Von Hippel-Lindau (*VHL*) tumor suppressor gene (IC_{50}s = 8 and 34.8 µM, respectively) over cells homozygously expressing *VHL* (IC_{50}s = 99.6 and >100 µM, respectively). However, it also decreases viability of RCC10 *VHL*$^{-/-}$ and RCC10 *VHL*$^{+/+}$ cells (IC_{50}s = 5.04 and 0.96 µM, respectively). It increases the levels of pro-caspase-3a, LC3B-I, and LC3B-II in RCC4 *VHL*$^{-/-}$ cells in a concentration-dependent manner.

Reference

1. Selka, A., Doiron, J.A., Lyons, P.A., *et al.* Discovery of a novel 2,5-dihydroxycinnamic acid-based 5-lipoxygenase inhibitor that induces apoptosis and may impair autophagic flux in RCC4 renal cancer cells. *Eur. J. Med. Chem.* **179**, 347-357 (2019).

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