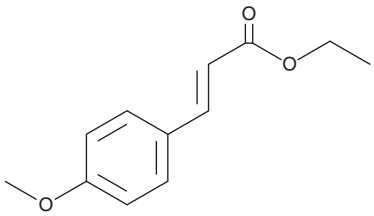
PRODUCT INFORMATION

Ethyl *p*-methoxycinnamate

Item No. 11740

CAS Registry No.:	24393-56-4
Formal Name:	3-(4-methoxyphenyl)-2E-propenoic acid, ethyl ester
Synonyms:	EPMC, Ethyl 4-methoxycinnamate, Ethyl *para*-methoxycinnamate
MF:	$C_{12}H_{14}O_3$
FW:	206.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 277, 310 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Hedychium spicatum*



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

Laboratory Procedures

Ethyl *p*-methoxycinnamate (EPMC) is supplied as a crystalline solid. A stock solution may be made by dissolving the EPMC in the solvent of choice, which should be purged with an inert gas. EPMC is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of EPMC in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Description

EPMC is a cinnamic acid ester that has been found in *K. galanga* and has diverse biological activities.[1-3] It is active against *T. rubrum*, *A. niger*, *S. cerevisiae*, and *E. floccosum* when used at concentrations less than 10 µg/ml.[1] EPMC inhibits COX-1 and COX-2 *in vitro* (IC_{50}s = 1.12 and 0.83 µM, respectively).[2] It inhibits microvessel sprouting in isolated rat aortic rings (IC_{50} = 91.9 µg/ml).[3] *In vivo*, EPMC (60 mg/kg) reduces IL-1 and TNF-α production and inhibits granuloma formation in a rat model of cotton pellet-induced granuloma formation. It also increases the latency to tail withdrawal in a hot plate test in rats when administered at doses ranging from 200 to 800 mg/kg.

References

1. Gupta, S.K., Banerjee, A.B., and Achari, B. Isolation of ethyl *p*-methoxycinnamate, the major antifungal principle of *Curcumba zedoaria*. *Lloydia* **39(4)**, 218-222 (1976).
2. Umar, M.I., Asmawi, M.Z., Sadikun, A., *et al*. Bioactivity-guided isolation of ethyl-*p*-methoxycinnamate, an anti-inflammatory constituent, from *Kaempferia galanga* L. extracts. *Molecules* **17(7)**, 8720-8734 (2012).
3. Umar, M.I., Asmawi, M.Z., Sadikun, A., *et al*. Ethyl-*p*-methoxycinnamate isolated from *Kaempferia galanga* inhibits inflammation by suppressing interleukin-1, tumor necrosis factor-α, and angiogenesis by blocking endothelial functions. *Clinics (Sao Paulo)* **69(2)**, 134-144 (2014).

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