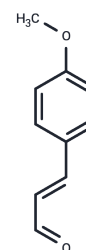


4-Methoxycinnamaldehyde

Chemical Properties

CAS No. :	1963-36-6
Formula:	C ₁₀ H ₁₀ O ₂
Molecular Weight:	162.19
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	4-Methoxycinnamaldehyde (p-Methoxycinnamaldehyde) is an active ingredient of <i>Agastache rugosa</i> . 4-Methoxycinnamaldehyde has cytoprotective activity against respiratory syncytial virus (RSV) in human laryngeal carcinoma cell lines, and helps to control disease induced by RSV infection, with an IC ₅₀ of approximately 0.055 µg/mL. The IC ₅₀ was about 0.055 µg/mL.
Targets(IC ₅₀)	RSV
In vitro	4-Methoxycinnamaldehyde could effectively inhibit cytopathic effect of RSV (p<0.0001) with an estimated IC(50) of 0.055microg/ml and a selectivity index (SI) of 898.2. 4-Methoxycinnamaldehyde (0.03microg/ml) could inhibit viral entrance by interfering viral attachment (IC(50) of 0.06microg/ml; p<0.0001) and internalization (IC(50) of 0.01 microg/ml; p<0.0001). 4-Methoxycinnamaldehyde significantly increased the basal production of IFN (p=0.0015), but not the virus-induced IFN production. In conclusion, 4-Methoxycinnamaldehyde might be helpful to manage the disease induced by RSV infection.[1]

Solubility Information

Solubility	DMSO: 60 mg/mL (369.94 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (30.83 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.1656 mL	30.828 mL	61.6561 mL
5 mM	1.2331 mL	6.1656 mL	12.3312 mL
10 mM	0.6166 mL	3.0828 mL	6.1656 mL
50 mM	0.1233 mL	0.6166 mL	1.2331 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

- Wang KC, et al. 4-Methoxycinnamaldehyde inhibited human respiratory syncytial virus in a human larynx carcinoma cell line. *Phytomedicine*. 2009;16(9):882-886.
- Nesterov VN, et al. A combinatorial chemistry approach to new materials for non-linear optics. II. 4-(Dimethylamino)cinnamaldehyde and a molecular complex of 4-methoxycinnamaldehyde with 2,4-dinitroaniline. *Acta Crystallogr C*. 2000;56 (Pt 8):976-978.
- Srisook K, et al. Anti-inflammatory effect of trans-4-methoxycinnamaldehyde from *Etlingera pavieana* in LPS-stimulated macrophages mediated through inactivation of NF- κ B and JNK/c-Jun signaling pathways and in rat models of acute inflammation. *Toxicol Appl Pharmacol*. 2019;371:3-11

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