

4-Methoxycoumarine

Chemical Properties

CAS No.:	20280-81-3
Formula:	C ₁₀ H ₈ O ₃
Molecular Weight:	176.17
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	4-Methoxycoumarine has antitumour effects.
Targets(IC ₅₀)	Others: None
In vitro	Coumarin has antitumour effects in vivo and cytostatic effects in vitro. Its half-life in humans is short (1-1.5 h) and the monohydroxylated biotransformation products have significantly longer half-lives. One or several of these products may thus be responsible for the antitumoral effects. METHODS AND RESULTS: We have assayed the in vitro cytostatic activity of five monohydroxylated coumarins (3-, 4-, 6-, 7- and 8-monohydroxycoumarin), their acetates and methyl-ethers. Murine melanoma cells (cell line B16-F10) and murine fibroblasts (B82) were exposed to the test compounds at concentrations between 10 and 160 microg/ml. The cytostatic effects were estimated by reduction of the tetrazolium dye MTT. In the melanoma cells, some of the compounds inhibited growth after exposure for 1 day. In contrast, coumarin inhibited growth to a smaller extent, and only after exposure for 3 days. The most active compounds (3-acetoxycoumarin, 4-methoxycoumarin(4-Methoxycoumarine) and 6-hydroxycoumarin), as well as coumarin, were also assayed in murine fibroblasts. CONCLUSIONS: The cytostatic effects of 4-methoxycoumarin(4-Methoxycoumarine) and 6-hydroxycoumarin were less pronounced in fibroblasts than in melanoma cells. Our observations suggest that these compounds may have a greater therapeutic margin.

Solubility Information

Solubility	DMSO: 10 mM (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.676 mL	28.382 mL	56.763 mL
5 mM	1.135 mL	5.676 mL	11.353 mL
10 mM	0.568 mL	2.838 mL	5.676 mL
50 mM	0.114 mL	0.568 mL	1.135 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Cytostatic activity of coumarin metabolites and derivatives in the B16-F10 murine melanoma cell line. Melanoma Research, 1999, 9(3):243-248.

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