

Guajadial C

Chemical Properties

CAS No.:	1529775-02-7
Formula:	C30H34O5
Molecular Weight:	474.58
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Guajadial C acts as a Top1 catalytic inhibitor and can delay Top1 poison-mediated DNA damage. It shows cytotoxicity against five human cancer cell lines.
Targets(IC ₅₀)	Topoisomerase: None
In vitro	<p>Psidium guajava L., a species native to South America, has been widely cultivated in the tropical and subtropical areas of China for its popular fruits. METHODS AND RESULTS: The preliminary analysis by liquid chromatography-ultraviolet (LC-UV) indicated the presence of meroterpenoids in the fruits of P. guajava (guava). Subsequent fractionation of the petroleum ether extract resulted in the identification of two new meroterpenoids, psiguajavadials A (1) and B (2), together with 14 previously described meroterpenoids (3-16, including guajadial A, guajadial B, Guajadial C, guajadial D, guajadial E and guajadial F). Their structures were fully elucidated by comprehensive spectroscopic techniques and theoretical calculations. All of the meroterpenoids showed cytotoxicities against five human cancer cell lines, with guajadial B (12) being the most effective having an IC₅₀ value of 150 nM toward A549 cells. Furthermore, biochemical topoisomerase I (Top1) assay revealed that psiguajavadiol A (1), psiguajavadiol B (2), guajadial B (12), Guajadial C (14), and guajadial F (16) acted as Top1 catalytic inhibitors and delayed Top1 poison-mediated DNA damage. The flow cytometric analysis indicated that the new meroterpenoids psiguajavadials A (1) and B (2) could induce apoptosis of HCT116 cells. CONCLUSIONS: These data suggest that meroterpenoids from guava fruit could be used for the development of antitumor agents.</p>

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.107 mL	10.536 mL	21.071 mL
5 mM	0.421 mL	2.107 mL	4.214 mL
10 mM	0.211 mL	1.054 mL	2.107 mL
50 mM	0.042 mL	0.211 mL	0.421 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. Meroterpenoids with Antitumor Activities from Guava (*Psidium guajava*). J Agric Food Chem. 2017 Jun 21;65(24):4993-4999.

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