

Psidial A

Chemical Properties

CAS No.:	1207181-35-8
Formula:	C ₃₀ H ₃₄ O ₅
Molecular Weight:	474.6
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

Biological Description

Description	Psidial A shows activity to enzyme PTP1B; it also reduces tumor growth and stimulate uterus proliferation.
Targets(IC ₅₀)	Estrogen receptor: None Progesterone receptor: None
In vitro	Anticancer drug research based on natural compounds enabled the discovery of many drugs currently used in cancer therapy. METHODS AND RESULTS: Here, we report the in vitro, in vivo and in silico anticancer and estrogen-like activity of Psidium guajava L. (guava) extracts and enriched mixture containing the meroterpenes guajadial, Psidial A and psiguadial A and B. All samples were evaluated in vitro for anticancer activity against nine human cancer lines: K562 (leukemia), MCF7 (breast), NCI/ADR-RES (resistant ovarian cancer), NCI-H460 (lung), UACC-62 (melanoma), PC-3 (prostate), HT-29 (colon), OVCAR-3 (ovarian) and 786-0 (kidney). Psidium guajava's active compounds displayed similar physicochemical properties to estradiol and tamoxifen, as in silico molecular docking studies demonstrated that they fit into the estrogen receptors (ERs). The meroterpene-enriched fraction was also evaluated in vivo in a Solid Ehrlich murine breast adenocarcinoma model, and showed to be highly effective in inhibiting tumor growth, also demonstrating uterus increase in comparison to negative controls. CONCLUSIONS: The ability of guajadial, Psidial A and psiguadials A and B to reduce tumor growth and stimulate uterus proliferation, as well as their in silico docking similarity to tamoxifen, suggest that these compounds may act as Selective Estrogen Receptors Modulators (SERMs), therefore holding significant potential for anticancer therapy.

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	10.535 mL	21.070 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. In vitro, in vivo and in silico analysis of the anticancer and estrogen-like activity of guava leaf extracts. Curr Med Chem. 2014;21(20):2322-30.
2. Psiguadials A and B, two novel meroterpenoids with unusual skeletons from the leaves of Psidium guajava. Org Lett. 2010 Nov 5;12(21):5040-3.

Inhibitors · Natural Compounds · Compound Libraries

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