Data Sheet (Cat.No.TN4064)

TargetMol
A DRUG SCREENING EXPERT

Flavoglaucin

Chemical Properties

CAS No.:	523-73-9
Formula:	C19H28O3
Molecular Weight:	304.43
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Flavoglaucin exhibits significant inhibitory effects on PTP1B, the IC50 value of 13.4, micrometer; it also shows good binding affinity for human opioid or cannabinoid receptors. Flavoglaucin appears to be an antitumor promoter, it also has anti-inflammatory effects, it shows inhibitory effects on inflammatory mediators via the induction of heme oxygenase-1 in lipopolysaccharide-stimulated RAW264.7 macrophages. Flavoglaucin exhibits a significant radical scavenging activity against 1,1-diphenyl-2-picrylhydrazyl (DPPH) with theIC(50) value of 11.3 microM.
Targets(IC_{50})	COX: None HO-1: None IL Receptor: None NF-κB: None NO: None NOS: None Nrf2: None PGE: None PTP1B: None TNF-α: None
In vitro	METHODS AND RESULTS:Bioassay-guided fractionation of the fungus Eurotium repens resulted in the isolation of two new benzyl derivatives, (E)-2-(hept-1-enyl)-3-(hydroxymethyl)-5-(3-methylbut-2-enyl)benzene-1,4-diol (1) and (E)-4-(hept-1-enyl)-7-(3-methylbut-2-enyl)-2,3-dihydrobenzofuran-2,5-diol (2), along with seven known compounds (3-9) including five benzaldehyde compounds, Flavoglaucin (3), tetrahydroauroglaucin (4), dihydroauroglaucin (5), auroglaucin (6), and 2-(2',3-epoxy-1',3'- heptadienyl)-6-hydroxy-5-(3-methyl-2-butenyl)benzaldehyde (7), one diketopiperazine alkaloid, echinulin (8), and 5,7-dihydroxy-4-methylphthalide (9). The chemical structures of these compounds were established on the basis of extensive 1D and 2D NMR and HRMS data. CONCLUSIONS:Compounds 1-4 and 6 showed good binding affinity for human opioid or cannabinoid receptors. These findings have important implications for psychoactive studies with this class of compounds.

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.285 mL	16.424 mL	32.848 mL
5 mM	0.657 mL	3.285 mL	6.570 mL
10 mM	0.328 mL	1.642 mL	3.285 mL
50 mM	0.066 mL	0.328 mL	0.657 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 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Benzyl derivatives with in vitro binding affinity for human opioid and cannabinoid receptors from the fungus Eurotium repens. J Nat Prod. 2011 Jul 22;74(7):1636-9.
2. Evaluation of flavoglaucin, its derivatives and pyranonigrins produced by molds used in fermented foods for inhibiting tumor promotion. Biosci Biotechnol Biochem. 2010;74(5):1120-2.
3. A new radical scavenging anthracene glycoside, asperflavin ribofuranoside, and polyketides from a marine isolate of the fungus microsporum. Chem Pharm Bull (Tokyo). 2006 Jun;54(6):882-3.

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