Data Sheet (Cat.No.TN4699)

TargetMol
A DRUG SCREENING EXPERT

Ohchinin

Chemical Properties

CAS No.:	67023-80-7
Formula:	C36H42O8
Molecular Weight:	602.73
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	Ohchinin exhibits potent inhibitory activities with 26 - 66% reduction of melanin content at 100 μm concentration with almost no or low toxicity to the B16 melanoma cells (70 - 99% cell viability at 100 μm).
Targets(IC_{50})	Others: None
In vitro	Nine limonoids, 1-9, one apocarotenoid, 11, one alkaloid, 12, and one steroid, 13, from the leaf extract; and one triterpenoid, 10, five steroids, 14-18, and two flavonoids, 19 and 20, from the bark extract of Melia azedarach L. (Chinaberry tree; Meliaceae) were isolated. METHODS AND RESULTS: Among these compounds, three compounds, 4-6, were new, and their structures were established as 3-deacetyl-28-oxosalannolactone, 3-deacetyl-28-oxosalanninolide, and 3-deacetyl-17-defurano-17,28-dioxosalannin, respectively, on the basis of extensive spectroscopic analyses and comparison with literature data. All of the isolated compounds were evaluated for their cytotoxic activities against leukemia (HL60), lung (A549), stomach (AZ521), and breast (SK-BR-3) cancer cell lines. 3-Deacetyl-4'-demethyl-28-oxosalannin (3) against HL60 and AZ521 cells, and methyl kulonate (10) against HL60 cells exhibited potent cytotoxicities with IC50 values in the range of 2.8-5.8 μM. In addition, upon evaluation of compounds 1-13 against production of nitric oxide (NO) in mouse macrophage RAW 264.7 cells induced by lipopolysaccharide (LPS), seven, i.e., trichilinin B (1), 4, Ohchinin (7), 23-hydroxyOhchininolide (8), 21-hydroxyisoOhchininolide (9), 10, and methyl indole 3-carboxylate (12), inhibited production of NO with IC50 values in the range of 4.6-87.3 μM with no, or almost no, toxicity to the cells (IC50 93.2-100 μM). CONCLUSIONS: Western blot analysis revealed that compound 7 reduced the expression levels of the inducible NO synthase (iNOS) and COX-2 proteins in a concentration-dependent manner. Furthermore, compounds 5, 6, 13, and 18-20 exhibited potent inhibitory effects (IC50 299-381 molar ratio/32 pmol TPA) against Epstein-Barr virus early antigen (EBV-EA) activation induced by 12-O-tetradecanoylphorbol-13-acetate (TPA) in Raji cell line.

Solubility Information

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

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.659 mL	8.296 mL	16.591 mL
5 mM	0.332 mL	1.659 mL	3.318 mL
10 mM	0.166 mL	0.830 mL	1.659 mL
50 mM	0.033 mL	0.166 mL	0.332 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. Cytotoxic and nitric oxide production-inhibitory activities of limonoids and other compounds from the leaves and bark of Melia azedarach. Chem Biodivers. 2014 Aug;11(8):1121-39.

2. Azadirachtin inhibits proliferation of Sf 9 cells in monolayer culture. Z Naturforsch C. 1993 May-Jun;48(5-6):495-9.

3. Melanogenesis-Inhibitory Activities of Isomeric C-seco Limonoids and Deesterified Limonoids. Chem Biodivers. 2016 Oct;13(10):1410-1421.

Tel:781-999-4286 E-mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481