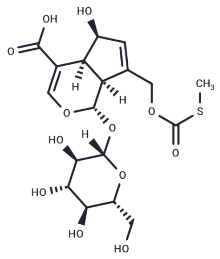
Data Sheet (Cat.No.T5739)

TargetMol

Paederosidic acid

Chemical Properties



CAS No. : 18842-98-3

Formula: C18H24O12S

Molecular Weight: 464.44

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Paederosidic acid has significant anti-tumor, anticonvulsant and sedative effects. Paederosidic acid increases brain gamma-aminobutyric acid and decreases glutamic acid in the brain, and it up-regulates expressions of GAD 65, may be a promising future therapeutic agent for treatment of epilepsy.
Targets(IC50)	Apoptosis,Bcl-2 Family
In vitro	Paederosidic acid(PA) showed significant anti-tumor activity on lung cancer in vitro; the mechanisms were involved in inducing mitochondria-mediated apoptosis via up-regulation of caspase-3, caspase-8, caspase-9, Bid, Bax, down-regulation of Bcl-2 and stimulating the release of Cyto-C from mitochondria.JNK phosphorylation levels significantly increased concomitantly with decrease in Akt phosphorylation after treatment with PA in A549 cells. However, JNK siRNA-transfected cells diminished PA-induced caspase-3, 8 and 9, Bid and Bax activaton while enhanced the Bcl-2 activation. PA-induced JNK activation played an important functional role in apoptosis[1].
In vivo	Anticonvulsant and sedative effects of paederosidic acid isolated from Paederia scandens (Lour.) Merrill. in mice and rats.Paederosidic acid (5, 10, 20, and 40 mg/kg, ip) had significant anticonvulsant and sedative effects. paederosidic acid increased brain gamma-aminobutyric acid and decreased glutamic acid in the brain, and it up-regulated expressions of GAD 65. Paederosidic acid may be a promising future therapeutic agent for treatment of epilepsy[2].
Cell Research	The anti-proliferative effects of PA on A549 cells were evaluated by MTT method and the IC50 values were calculated. Furthermore, the PA-induced apoptosis in A549 cells was determined by fluorescence microscope via staining with DAPI and by flow cytometer via staining with FITC conjugated Annexin V/PI. The expression of apoptosis-related or signaling proteins was investigated by Western blotting[1]
Animal Research	Anticonvulsant activities of paederosidic acid were evaluated by maximal electroshock and pentylenetetrazole-induced seizures in male mice. Then, pentobarbital sodium-induced sleeping time and locomotor activity tests in mice were used to evaluate the sedative effects of paederosidic acid. Finally, the mechanism of paederosidic acid was explored by evaluating the contents of Glu and GABA in the brain, and Western blot was used to measure GAD65 expression in the mouse brain[2].

Solubility Information

Solubility	DMSO: 55 mg/mL (118.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.31 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1531 mL	10.7657 mL	21.5313 mL
5 mM	0.4306 mL	2.1531 mL	4.3063 mL
10 mM	0.2153 mL	1.0766 mL	2.1531 mL
50 mM	0.0431 mL	0.2153 mL	0.4306 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Yu P , Shi L , Song M , et al. Antitumor activity of paederosidic acid in human non-small cell lung cancer cells via inducing mitochondria-mediated apoptosis[J]. Chemico-Biological Interactions, 2017, 269:33-40.

Yang T , Kong B , Gu J W , et al. Anticonvulsant and Sedative Effects of Paederosidic Acid isolated from Paederia scandens (Lour.) Merrill. in Mice and Rats[J]. Pharmacology Biochemistry and Behavior, 2013, 111.