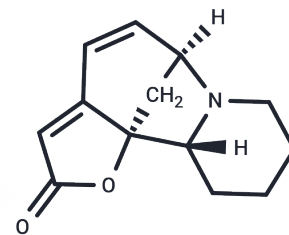


(-)-Securinine

Chemical Properties

CAS No. : 5610-40-2
 Formula: C₁₃H₁₅NO₂
 Molecular Weight: 217.26
 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	(-)-Securinine (Securinine) is plant-derived alkaloid and also a GABAA receptor antagonist.
Targets(IC50)	GABA Receptor
In vitro	(-)-Securinine significantly inhibits HeLa cells growth with IC ₅₀ values of 7.02±0.52 µg/mL (32.3 µM). (-)-Securinine induces apoptosis in a dose-dependent manner in the tested cells, increases the percentage of ROS positive cells and depolarized cells as well as stimulates the activity of ERK1/2, caspase-9 and -3/7. (-)-Securinine also induces cell cycle arrest in S phase. Real-time PCR analysis shows high expression of tumor necrosis factor receptor superfamily (TNFRSF) genes in the cells stimulated with (-)-Securinine.
In vivo	In the tumor model, treatment with (-)-Securinine markedly inhibits tumor growth, suggesting its potential as an Acute Myeloid Leukemia (AML) treatment. Mice treated with (-)-Securinine (n=5 mice, bilateral tumors) show tumors that are, on average, over 75% smaller than those in vehicle-treated mice at the conclusion of the study.

Solubility Information

Solubility	DMSO: 2 mg/mL (9.21 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.6028 mL	23.0139 mL	46.0278 mL
5 mM	0.9206 mL	4.6028 mL	9.2056 mL
10 mM	0.4603 mL	2.3014 mL	4.6028 mL
50 mM	0.0921 mL	0.4603 mL	0.9206 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

Stefanowicz-Hajduk J, et al. Securinine from *Phyllanthus glaucus* Induces Cell Cycle Arrest and Apoptosis in Human Cervical Cancer HeLa Cells. *PLoS One*. 2016 Oct 28;11(10):e0165372.

Yuan Z, Jing H, Deng Y, et al. P4HB maintains Wnt-dependent stemness in glioblastoma stem cells as a precision therapeutic target and serum marker. *Oncogenesis*. 2024, 13(1): 42.

Kalpana Gupta, et al. Securinine, a Myeloid Differentiation Agent with Therapeutic Potential for AML. *PLoS One*. 2011; 6(6): e21203.

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