

Peruvoside

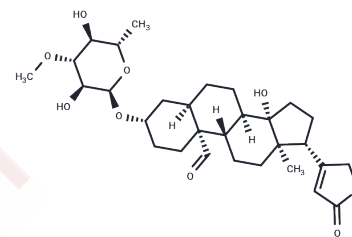
Chemical Properties

CAS No. : 1182-87-2

Formula: C₃₀H₄₄O₉

Molecular Weight: 548.67

Storage: Keep away from moisture, Keep away from direct sunlight
 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	Peruvoside (Encordin) is a natural cardiac glycoside that inhibits Na ⁺ /K ⁺ -ATPase to increase myocardial contractility; causes cell cycle arrest in leukemia stem cells at the G ₂ /M phase, and; inhibits NSCLC cell growth as a Src inhibitor; and induces apoptosis in cancer cells through MAPK Wnt / β-catenin and PI3K / AKT / mTOR .
Targets(IC50)	Apoptosis,ATPase,EGFR,STAT,Autophagy,JNK,PI3K,Src,Wnt/beta-catenin
In vitro	Methods: A549 lung cancer cell line was treated with Peruvoside (5, 10, 50 nM, 24 hours), and the expression of related proteins was analyzed by Western Blot. Results: Peruvoside inhibited the protein expression and phosphorylation of Src, EGFR and STAT3 in A549 cells. [1]
In vivo	Methods: Nude mice with A549 cell subcutaneous xenografts were treated with Peruvoside (0.1 mg/kg, intraperitoneal injection, daily, for 28 days). Tumor growth was then monitored every 7 days. Results: The mean tumor size in the Peruvoside-treated group was 129.9 mm ³ (95% CI = 86-174 mm ³ ; P = 0.0068), which was significantly smaller than that in the control group (348 mm ³ , 95% CI = 189-507 mm ³). The tumor weight was also significantly reduced, from 0.55 g in the control group to 0.26 g in the Peruvoside-treated group (P = 0.0126). [1]

Solubility Information

Solubility	DMSO: 200 mg/mL (364.52 mM),Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8226 mL	9.1129 mL	18.2259 mL
5 mM	0.3645 mL	1.8226 mL	3.6452 mL
10 mM	0.1823 mL	0.9113 mL	1.8226 mL
50 mM	0.0365 mL	0.1823 mL	0.3645 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

Lai Y, et al. Peruvoside is a novel Src inhibitor that suppresses NSCLC cell growth and motility by downregulating multiple Src-EGFR-related pathways. *Am J Cancer Res.* 2022 Jun 15;12(6):2576-2593.

Wu KX, et al. The host-targeting compound peruvoside has a broad-spectrum antiviral activity against positive-sense RNA viruses. *Acta Pharm Sin B.* 2023 May;13(5):2039-2055.

Reddy D, et al. Peruvoside targets apoptosis and autophagy through MAPK Wnt/ β -catenin and PI3K/AKT/mTOR signaling pathways in human cancers. *Life Sci.* 2020 Jan 15;241:117147. doi: 10.1016/j.lfs.2019.117147. Epub 2019 Dec 9. PMID: 31830480.

Feng Q, et al. Peruvoside, a Cardiac Glycoside, Induces Primitive Myeloid Leukemia Cell Death. *Molecules.* 2016 Apr 22;21(4):534.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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