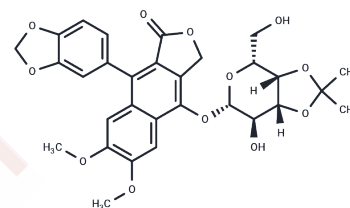


PHY34

Chemical Properties

CAS No. : 2130033-55-3
 Formula: C₃₀H₃₀O₁₂
 Molecular Weight: 582.55
 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	PHY34 is a late stage autophagy inhibitor with nanomolar level inhibitory effect and anti-tumor activity against high-grade serous ovarian cancer (HGSOC) in vivo.
Targets(IC50)	Autophagy
In vitro	In HGSOC cell lines, PHY34 showed cytotoxicity with IC ₅₀ of 4 nM. Its IC ₅₀ values in MDA-MB-435 and MDAMB-231 cell lines were 23 nM and 5.2 nM, respectively. In OVCAR3 cells, 100 nM PHY34 increased the level of early and late apoptotic cells [1].
In vivo	In the hollow fiber deflector, PHY34 significantly inhibited the growth of cancer cells; In the transplanted tumor model, PHY34 reduced the ovarian tumor load. The bioavailability of mice was 56.6% after intravenous injection of 0.6 mg/kg, intraperitoneal injection of 1.8 mg/kg or oral administration of 75 mg/kg PHY34, and 2.5% after oral administration. After oral administration, the systemic clearance (CL) was 194.1 L/hr/kg, which was nearly 40 times the liver blood flow of mice, indicating that PHY34 had significant extrahepatic clearance. After oral administration, PHY34 was rapidly absorbed, and T _{max} was 0.25 hr [1].

Solubility Information

Solubility	DMF: 30 mg/mL (51.5 mM),Sonication is recommended. DMSO:PBS (pH 7.2) (1:3): 0.25 mg/mL (0.43 mM),Sonication is recommended. DMSO: 90 mg/mL (154.49 mM),Sonication is recommended. Ethanol: 10 mg/mL (17.17 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (5.66 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7166 mL	8.583 mL	17.1659 mL
5 mM	0.3433 mL	1.7166 mL	3.4332 mL
10 mM	0.1717 mL	0.8583 mL	1.7166 mL
50 mM	0.0343 mL	0.1717 mL	0.3433 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

Young, A.N., Herrera, D., Huntsman, A.C., et al. Phyllanthusmin derivatives induce apoptosis and reduce tumor burden in high-grade serous ovarian cancer by late-stage autophagy inhibition. *Mol. Cancer Ther.* 17(10):2123-2135 (2018)

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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