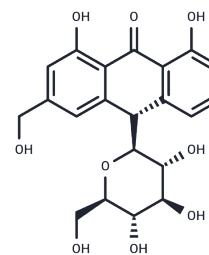


Isobarbaloin

Chemical Properties

CAS No. :	5133-19-7
Formula:	C ₂₁ H ₂₂ O ₉
Molecular Weight:	418.39
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	Isobarbaloin (Barbaloin-A) (Aloin) is a natural anthracycline from Aloe vera, is a tyrosinase inhibitor.
Targets(IC50)	Tyrosinase
In vivo	In the MCF-7 cell line, Aloin diminishes the proportion of cells in mitosis by inducing apoptosis, suppresses the expression of topoisomerase II α , and downregulates cyclin B1 protein expression. In HeLaS3 cells, Aloin exhibits significant antiproliferative effects at physiological concentration (IC ₅₀ =97 μ M), leading to cell cycle arrest in the S phase and a marked increase in apoptosis.

Solubility Information

Solubility	DMSO: 250 mg/mL (597.53 mM),Sonication is recommended. H ₂ O: 1 mg/mL (2.39 mM),Sonication is recommended. Ethanol: 2 mg/mL (4.78 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (23.9 mM),Solution. <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	2.3901 mL	11.9506 mL	23.9011 mL
5 mM	0.478 mL	2.3901 mL	4.7802 mL
10 mM	0.239 mL	1.1951 mL	2.3901 mL
50 mM	0.0478 mL	0.239 mL	0.478 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

Sun R , Zhai R , Ma C , et al. Combination of aloin and metformin enhances the antitumor effect by inhibiting the growth and invasion and inducing apoptosis and autophagy in hepatocellular carcinoma through PI3K/AKT/mTOR pathway[J]. Cancer Medicine, 2020, 9(3).

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481