

Bufalin

Chemical Properties

CAS No. : 465-21-4

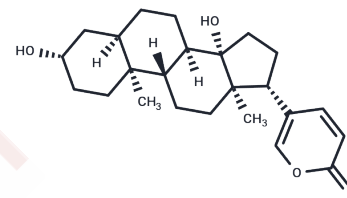
Formula: C₂₄H₃₄O₄

Molecular Weight: 386.52

Keep away from direct sunlight

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	Bufalin is an active ingredient and one of the glycosides in the traditional Chinese medicine ChanSu; it is also a bufadienolide toxin originally isolated from the venom of the Chinese toad <i>Bufo gargarizans</i> , with potential cardiotoxic and antineoplastic activity. Although the mechanism of action of bufalin is still under investigation, this agent is a specific Na ⁺ /K ⁺ -ATPase inhibitor and can induce apoptosis in Y cell lines through the activation of the transcription factor AP-1 via a mitogen activated protein kinase (MAPK) pathway.
Targets(IC50)	ATPase

Solubility Information

Solubility	DMSO: 100 mg/mL (258.72 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: 4 mg/mL (10.35 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	2.5872 mL	12.9359 mL	25.8719 mL
5 mM	0.5174 mL	2.5872 mL	5.1744 mL
10 mM	0.2587 mL	1.2936 mL	2.5872 mL
50 mM	0.0517 mL	0.2587 mL	0.5174 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

Chen YY, et al. Environ Toxicol. 2015 Jan;30(1):74-82.

Chen F, Zhu L, Hu J, et al. Bufalin attenuates triple-negative breast cancer cell stemness by inhibiting the expression of SOX2/OCT4. Oncology letters. 2020, 20(5): 1-1.

Norcantharidin overcomes vemurafenib resistance in melanoma by inhibiting pentose phosphate pathway and lipogenesis via downregulating the mTOR pathway

Chen F, Zhu L, Hu J, et al. Bufalin attenuates triple-negative breast cancer cell stemness by inhibiting the expression of SOX2/OCT4[J]. Oncology letters. 2020, 20(5): 1-1.

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