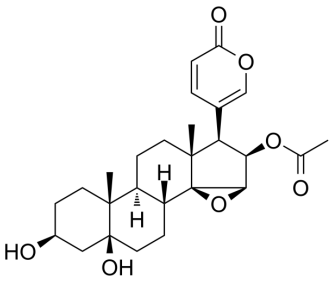
Cinobufotalin

Cat. No.:	HY-N0880
CAS No.:	1108-68-5
Molecular Formula:	$C_{26}H_{34}O_7$
Molecular Weight:	458.54
Target:	Others
Pathway:	Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (272.60 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.1808 mL	10.9042 mL	21.8083 mL
	5 mM	0.4362 mL	2.1808 mL	4.3617 mL
	10 mM	0.2181 mL	1.0904 mL	2.1808 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.17 mg/mL (4.73 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.17 mg/mL (4.73 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.17 mg/mL (4.73 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Cinobufotalin is a cardiotonic steroids or bufadienolides, is extracted from the skin secretions of the giant toads. Cinobufotalin has been used as a cardiotonic, diuretic and a hemostatic agent, Cinobufotalin is also a potential anti-lung cancer agent[1].

In Vitro

Cinobufotalin (0.1-10 μM; 72 hours; A549, H460 and HTB-58 human lung cancer cells) treatment induces cytotoxic effect against lung cancer cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	A549, H460 and HTB-58 human lung cancer cells
Concentration:	0.1 μM, 0.5 μM, 1 μM, 5 μM, 10 μM
Incubation Time:	72 hours
Result:	Significantly induced cell death in a concentration-dependent manner.

In Vivo

Cinobufotalin (1-5 mg/kg; intraperitoneal injection; twice daily; for 1 weeks; male nude mice) treatment inhibits A549 lung cancer cell growth in vivo[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male nude mice (4-6 weeks old, BALB/c) with A549 cells[1]
Dosage:	1 mg/kg or 5 mg/kg
Administration:	Intraperitoneal injection; twice daily; for 1 weeks
Result:	Inhibited A549 lung cancer cell growth in vivo.

CUSTOMER VALIDATION

- Pharmacol Res. 2021 Nov 2;105927.
- Eur J Pharmacol. 2021 Jun 24;906:174280.

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REFERENCES

[1]. Kai S, et al. Pre-clinical evaluation of cinobufotalin as a potential anti-lung cancer agent. Biochem Biophys Res Commun. 2014 Sep 26;452(3):768-74.

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