Berbamine

Cat. No.: HY-N0714

CAS No.: 478-61-5

Molecular Formula: $C_{37}H_{40}N_2O_6$

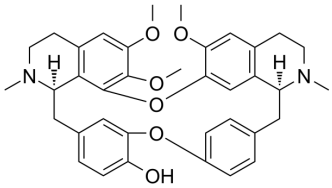
Molecular Weight: 608.72

Target: NF-κB; Autophagy

Pathway: NF-κB; Autophagy

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 : 100 mg/mL (164.28 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	1.6428 mL	8.2140 mL	16.4279 mL
5 mM	0.3286 mL	1.6428 mL	3.2856 mL
10 mM	0.1643 mL	0.8214 mL	1.6428 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: ≥ 2.5 mg/mL (4.11 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (4.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Berbamine is a natural compound extracted from traditional Chinese medicine Phellodendron amurense Rupr. with anti-tumor, immunomodulatory and cardiovascular effects. Berbamine is a calcium channel blocker.

IC_{50} & Target

NF-κB

In Vitro

Berbamine (8.17 μg/mL, 24 h) inhibits the growth of KM3 cells with an inhibition of 50%[1].
Berbamine (185.20 μg/mL, 48 h) induces apoptosis of normal hematopoietic cells with an inhibition of 50%[1].
Berbamine (8 μg/mL, 24 h) inhibits the growth of KM3 cells with a percentage of apoptotic cells is 14.32%[1].
Berbamine (8 μg/mL, 24 h) inhibits p65 nuclear translocation and expression of IKKα[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	KM3 cell
Concentration:	1−32 μg/mL
Incubation Time:	24, 48, or 72 h
Result:	Inhibited the growth of KM3 cells in a dose- and time-dependent manner.

Apoptosis Analysis[1]

Cell Line:	KM3 cell
Concentration:	4 μg/mL
Incubation Time:	6, 12, or 24 h
Result:	Induced apoptosis in a time-dependent manner treated at 8 μg/mL.

Western Blot Analysis[1]

Cell Line:	KM3 cell
Concentration:	8 μg/mL
Incubation Time:	0, 6, 12, or 24 h
Result:	Inhibited p65 nuclear translocation and expression of IKKα.

In Vivo

Berbamine (100 mg/kg, oral) suppresses the growth of Huh7 xenografted tumors over time and leads to a tumor reduction of 70% based on the tumor weight[2].

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

Animal Model:	Huh7 xenograft NOD/SCID mice model[2]
Dosage:	100mg/kg
Administration:	Oral gavage (p.o.), twice a day for 5 consecutive days
Result:	Suppressed tumor growth and reduced tumor weight by 70%.

CUSTOMER VALIDATION

- J Ethnopharmacol. 2022 Dec 7;303:116025.
- Mol Pharm. 2022 Oct 21.
- Drug Des Devel Ther. 2022 Jan 11;16:129-141.
- Cell Stress Chaperones. 2021 Jan 6.
- Patent. US20220017867A1.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Liang Y, et al. Berbamine, a novel nuclear factor kappaB inhibitor, inhibits growth and induces apoptosis in human myeloma cells. Acta Pharmacol Sin. 2009 Dec;30(12):1659-65.

[2]. Meng Z, et al. Berbamine inhibits the growth of liver cancer cells and cancer-initiating cells by targeting Ca^{2+}/calmodulin-dependent protein kinase II. Mol Cancer Ther. 2013 Oct;12(10):2067-77.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA