Bergenin

Cat. No.: HY-N0017

CAS No.: 477-90-7

Molecular Formula: $C_{14}H_{16}O_9$

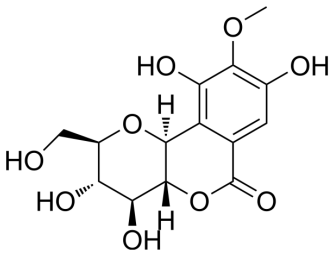
Molecular Weight: 328.27

Target: Autophagy; Apoptosis; Bacterial; Fungal; Virus Protease; NF-κB

Pathway: Autophagy; Apoptosis; Anti-infection; NF-κB

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 103.3 mg/mL (314.68 mM; Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0463 mL	15.2314 mL	30.4627 mL
	5 mM	0.6093 mL	3.0463 mL	6.0925 mL
	10 mM	0.3046 mL	1.5231 mL	3.0463 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 (7.62 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.62 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.62 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Bergenin is a cytoprotective and antioxidative polyphenol found in many medicinal plants. Bergenin has a wide spectrum activities such as hepatoprotective, antiinflammatory, immunomodulatory, antitumor, antiviral, and antifungal properties[1] [2].

In Vitro

Bergenin (7.5-30μM; 24 hours) decreases the viability of HeLa cervical cancer cells (IC_{50}=15 μM)[1].
Bergenin (7.5-30 μM; 24 hours) induces apoptosis in HeLa cervical cancer cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	HeLa cervical cancer cells
Concentration:	7.5, 15, 30 μM
Incubation Time:	24 hours
Result:	Decreased the viability of HeLa cervical cancer cells.

Cell Viability Assay[1]

Cell Line:	HeLa cervical cancer cells
Concentration:	7.5, 15, 30 μM
Incubation Time:	24 hours
Result:	Induced apoptosis in HeLa cervical cancer cells.

In Vivo

Pretreatment with Bergenin (12.5-100 mg/kg; i.p.; once) produces a dose-related inhibition of acetic acid-induced writhing in mice[3].

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

Animal Model:	Male Swiss Webster C57BL/6 mice[3]
Dosage:	12.5, 25, 50, 100 mg/kg
Administration:	i.p.; Once
Result:	Produced a dose-related inhibition of acetic acid-induced writhing in mice.

CUSTOMER VALIDATION

- ACS Omega. 2024 Feb 28;9(10):11870-11882.

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REFERENCES

[1]. Shi X, et al. Anticancer activity of bergenin against cervical cancer cells involves apoptosis, cell cycle arrest, inhibition of cell migration and the STAT3 signalling pathway. Exp Ther Med. 2019 May;17(5):3525-3529.

[2]. Yun J, et al. Bergenin decreases the morphine-induced physical dependence via antioxidative activity in mice. Arch Pharm Res. 2015 Jun;38(6):1248-54.

[3]. de Oliveira CM, et al. Antinociceptive properties of bergenin. J Nat Prod. 2011 Oct 28;74(10):2062-8.

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