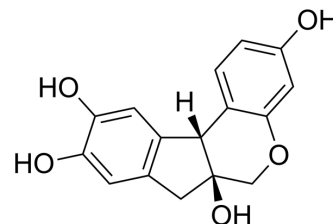


Brazilin

Cat. No.:	HY-N0072		
CAS No.:	474-07-7		
Molecular Formula:	C ₁₆ H ₁₄ O ₅		
Molecular Weight:	286.28		
Target:	Apoptosis; Autophagy		
Pathway:	Apoptosis; 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 : 33.33 mg/mL (116.42 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	3.4931 mL	17.4654 mL	34.9308 mL
		5 mM	0.6986 mL	3.4931 mL	6.9862 mL
10 mM		0.3493 mL	1.7465 mL	3.4931 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 (8.73 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (8.73 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Brazilin is a red dye precursor obtained from the heartwood of several species of tropical hardwoods. Brazilin inhibits the cells proliferation, promotes apoptosis, and induces autophagy through the AMPK/mTOR pathway. Brazilin shows chondroprotective and anti-inflammatory activities ^{[1][2][3]} .
In Vitro	Brazilin (40 μM, 24 h) shows no significant cytotoxic effect on PC12 cells ^[4] . Brazilin (10 μM, 1 h) reduces H ₂ O ₂ -induced (200 μM, 24 h) cytotoxicity in PC12 Cells ^[4] . Brazilin (10 μM, 1 h) antagonists H ₂ O ₂ -induced (200 μM, 24 h) cytotoxicity in PC12 Cells ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only. Cell Viability Assay ^[4]

	Cell Line:	PC12 cell line
	Concentration:	10, 20 μ M
	Incubation Time:	1 h
	Result:	Attenuated 200 μ M H ₂ O ₂ -induced decrease in cell viability at the concentration of 10 μ M and 20 μ M.(47.83 and 91.51% of the control value, respectively)
In Vivo	Brazilin (10 mg/kg, i.p, 28 d) alleviates the CMS-induced depressive- and anxiety-like behaviors in adult mice ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	Chronic mild stress (CMS) mice model ^[4]
	Dosage:	10 mg/kg
	Administration:	Intraperitoneally injected (i.p.), once a day for 28 d
	Result:	Decreased the prolonged latency to feeding significantly.

REFERENCES

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- [2]. Dapson RW, et al. Brazilwood, sappanwood, brazilin and the red dye brazilein: from textile dyeing and folk medicine to biological staining and musical instruments. Biotech Histochem. 2015;90(6):401-23.
- [3]. Jia Y, et al. [Effect of brazilin on apoptosis and autophagy of tongue cancer Tca8113 cells and its molecular mechanism]. Nan Fang Yi Ke Da Xue Xue Bao. 2019 Mar 30;39(3):351-356.
- [4]. Weinmann D, et al, Brazilin blocks catabolic processes in human osteoarthritic chondrocytes via inhibition of NFKB1/p50. J Orthop Res. 2018 Sep;36(9):2431-2438.

Caution: Product has not been fully validated for medical applications. For research use only.

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