(E,E)-Bisdemethoxycurcumin

Cat. No.: HY-N0007

CAS No.: 33171-05-0

Molecular Formula: $C_{19}H_{16}O_4$

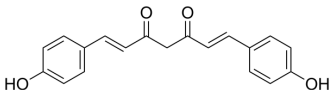
Molecular Weight: 308.33

Target: Apoptosis; Autophagy

Pathway: Apoptosis; Autophagy

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 : ≥ 100 mg/mL (324.33 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.2433 mL	16.2164 mL	32.4328 mL
5 mM	0.6487 mL	3.2433 mL	6.4866 mL
10 mM	0.3243 mL	1.6216 mL	3.2433 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 (8.11 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

(E,E)-Bisdemethoxycurcumin ((E,E)-Curcumin III) is a curcumin derivative with anti-inflammatory and anticancer activities.

In Vitro

Bisdemethoxycurcumin (1-10 μM; 5 h) significantly inhibits HT1080 cancer cell invasion, but does not affect cell migration[5].
Bisdemethoxycurcumin (1-10 μM; 24 h) inhibits the secret of MMP-9 in HT1080 cells, and affects cancer cell invasion and metastasis[5].
Bisdemethoxycurcumin (5-50 μM; 24 h) Bisdemethoxycurcumin (5-50 μM; 24 h) significantly inhibits collagenase, MMP-2 and MMP-9 activities in HT1080, but does not inhibit uPA activity[5].
Bisdemethoxycurcumin (25 μM; 18 h, 24 h) arrests cell cycle at G1 phase, and (5-25 μM) inhibits the expression of C/EBPα and PPARγ in 3T3-L1 adipocyte 270 differentiation[6].
Bisdemethoxycurcumin inhibits lipid accumulation in adipocytes, primarily by attenuating mitotic clonal expansion (MCE) to inhibit early lipogenesis[6].

	MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Bisdemethoxycurcumin (0.5% in diet; 15 weeks) significantly reduces both final body weight and body weight gain in HFD-induced obese mice[6]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Heliyon. 2023 Jul, 7(9), e17490.
- Vet Microbiol. 2021 Aug;259:109152.
- Future Pharmacol. 2024 Mar 8, 4(1), 256-278.

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REFERENCES

[1]. Lee PJ, et al. Bisdemethoxycurcumin Induces Apoptosis in Activated Hepatic Stellate Cells via Cannabinoid Receptor 2. Molecules. 2015 Jan 14;20(1):1277-92.

[2]. Chen J, et al. Natural borneol enhances bisdemethoxycurcumin-induced cell cycle arrest in the G2/M phase through up-regulation of intracellular ROS in HepG2 cells. Food Funct. 2014 Dec 24.

[3]. Luo C, et al. Bisdemethoxycurcumin attenuates gastric adenocarcinoma growth by inducing mitochondrial dysfunction. Oncol Lett. 2015 Jan;9(1):270-274.

[4]. Li YB, et al. Bisdemethoxycurcumin Increases Sirt1 to Antagonize t-BHP-Induced Premature Senescence in WI38 Fibroblast Cells. Evid Based Complement Alternat Med. 2013;2013:851714.

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