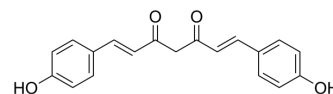


## (E,E)-Bisdemethoxycurcumin

<b>Cat. No.:</b>	HY-N0007
<b>CAS No.:</b>	33171-05-0
<b>Molecular Formula:</b>	C <sub>19</sub> H <sub>16</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	308.33
<b>Target:</b>	Apoptosis; Autophagy
<b>Pathway:</b>	Apoptosis; Autophagy
<b>Storage:</b>	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<sup>[1][2][3][4][5][6]</sup>.

#### In Vitro

Bisdemethoxycurcumin (1-10 μM; 5 h) significantly inhibits HT1080 cancer cell invasion, but does not affect cell migration<sup>[5]</sup>.  
 Bisdemethoxycurcumin (1-10 μM; 24 h) inhibits the secret of MMP-9 in HT1080 cells, and affects cancer cell invasion and metastasis<sup>[5]</sup>.  
 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<sup>[5]</sup>.  
 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<sup>[6]</sup>.  
 Bisdemethoxycurcumin inhibits lipid accumulation in adipocytes, primarily by attenuating mitotic clonal expansion (MCE)

	to inhibit early lipogenesis <sup>[6]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
<b>In Vivo</b>	Bisdemethoxycurcumin (0.5% in diet; 15 weeks) significantly reduces both final body weight and body weight gain in HFD-induced obese mice <sup>[6]</sup> . 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.
- [5]. Yodkeeree S, et al. Curcumin, demethoxycurcumin and bisdemethoxycurcumin differentially inhibit cancer cell invasion through the down-regulation of MMPs and uPA. *J Nutr Biochem*. 2009 Feb;20(2):87-95.
- [6]. Lai CS, et al. Bisdemethoxycurcumin Inhibits Adipogenesis in 3T3-L1 Preadipocytes and Suppresses Obesity in High-Fat Diet-Fed C57BL/6 Mice. *J Agric Food Chem*. 2016 Feb 3;64(4):821-30.

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

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