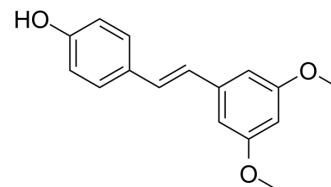


## Pterostilbene

<b>Cat. No.:</b>	HY-N0828		
<b>CAS No.:</b>	537-42-8		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>16</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	256.3		
<b>Target:</b>	Autophagy		
<b>Pathway:</b>	Autophagy		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 110 mg/mL (429.18 mM; Need ultrasonic)					
	<b>Preparing Stock Solutions</b>	<b>Solvent</b>	<b>Mass</b>	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
		<b>Concentration</b>				
		<b>1 mM</b>		3.9017 mL	19.5084 mL	39.0168 mL
<b>5 mM</b>			0.7803 mL	3.9017 mL	7.8034 mL	
		<b>10 mM</b>		0.3902 mL	1.9508 mL	3.9017 mL
Please refer to the solubility information to select the appropriate solvent.						
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 3.93 mg/mL (15.33 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.75 mg/mL (10.73 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.75 mg/mL (10.73 mM); Clear solution</li> </ol>					

### BIOLOGICAL ACTIVITY

<b>Description</b>	Pterostilbene is a stilbenoid isolated from blueberries and <i>Pterocarpus marsupium</i> <sup>[1]</sup> . Shows anti-oxidant, anti-inflammatory, anti-carcinogenic, anti-diabetic and anti-obesity properties <sup>[1][4]</sup> . Pterostilbene blocks ROS production <sup>[3]</sup> , also exhibits inhibitory activity against various free radicals such as DPPH, ABTS, hydroxyl, superoxide and hydrogen peroxide <sup>[4]</sup> .
<b>In Vitro</b>	Pterostilbene (0, 5, 25, 50, 100, 200 and 400 μM) shows inhibitory activity against the growth of HeLa cells, with IC <sub>50</sub> s of 101.2 μM and 65.9 μM at 24 and 48 hrs, respectively. Ipterostilbene (0, 25, 100 and 200 μM) also induces the apoptosis HeLa cells <sup>[2]</sup> . Pterostilbene (0.05, 0.1, 0.15 and 0.2 mM) has high anti-oxidant activity against DPPH, ABTS, hydroxyl, superoxide, hydrogen

peroxide in a dose-dependent manner. Pterostilbene decreases lipid peroxides and hydroperoxides, reduces protein carbonyl groups and restores protein sulphhydryl groups in response to damage by TBHP and As-Fe<sup>2+</sup>. Pterostilbene also inhibits single strand breaks in pBR322<sup>[4]</sup>.

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

#### In Vivo

Pterostilbene (30 mg/kg daily, p.o. for 21 days) inhibits reactive oxygen species production in the animal model of inflammation<sup>[3]</sup>.

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

## CUSTOMER VALIDATION

- J Agric Food Chem. 2017 Jun 7;65(22):4384-4394.
- J Pharmacol Sci. 23 September 2021.
- Immun Inflamm Dis. 2021 Aug 2.

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## REFERENCES

[1]. McCormack D, et al. A review of pterostilbene antioxidant activity and disease modification. Oxid Med Cell Longev. 2013;2013:575482.

[2]. Hong Bin W, et al. Pterostilbene (3',5'-dimethoxy-resveratrol) exerts potent antitumor effects in HeLa human cervical cancer cells via disruption of mitochondrial membrane potential, apoptosis induction and targeting m-TOR/PI3K/Akt signalling pathway. J BUON. 2018 Sep-Oct;23(5):1384-1389.

[3]. Perecko T, et al. The effects of pterostilbene on neutrophil activity in experimental model of arthritis. Biomed Res Int. 2013;2013:106041.

[4]. Acharya JD, et al. Protective effect of Pterostilbene against free radical mediated oxidative damage. BMC Complement Altern Med. 2013 Sep 26;13:238.

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

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444

Email: [customerservice@lifetechindia.com](mailto:customerservice@lifetechindia.com) Website: [www.lifetechindia.com](http://www.lifetechindia.com)