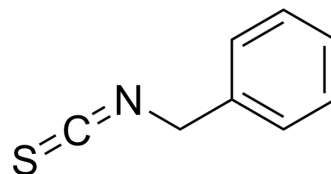


## Benzyl isothiocyanate

<b>Cat. No.:</b>	HY-77813
<b>CAS No.:</b>	622-78-6
<b>Molecular Formula:</b>	C <sub>8</sub> H <sub>7</sub> NS
<b>Molecular Weight:</b>	149.21
<b>Target:</b>	Bacterial; Apoptosis; Antibiotic; Parasite
<b>Pathway:</b>	Anti-infection; Apoptosis
<b>Storage:</b>	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 110 mg/mL (737.22 mM; Need ultrasonic)  
H<sub>2</sub>O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	6.7020 mL	33.5098 mL	67.0196 mL
	5 mM	1.3404 mL	6.7020 mL	13.4039 mL
	10 mM	0.6702 mL	3.3510 mL	6.7020 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: 2.75 mg/mL (18.43 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: 2.75 mg/mL (18.43 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.75 mg/mL (18.43 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Benzyl isothiocyanate is a member of natural isothiocyanates with antimicrobial activity<sup>[1][2]</sup>. Benzyl isothiocyanate potent inhibits cell mobility, migration and invasion nature and matrix metalloproteinase-2 (MMP-2) activity of murine melanoma cells<sup>[2]</sup>.

### REFERENCES

- [1]. Abdel-Kader MS, et al. Quantitative Analysis of Benzyl Isothiocyanate in *Salvadora persica* Extract and Dental Care Herbal Formulations Using Reversed Phase C18 High-

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Performance Liquid Chromatography Method. Pharmacogn Mag. 2017 Oct;13(Suppl 3):S412-S416.

[2]. Lai KC, et al. Benzyl isothiocyanate and phenethyl isothiocyanate inhibit murine melanoma B16F10 cell migration and invasion in vitro. Int J Oncol. 2017 Sep;51(3):832-840.

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

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