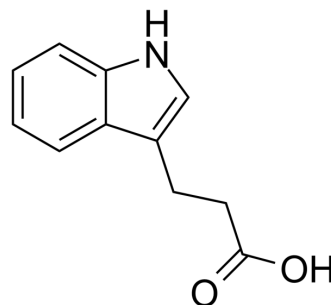


## 3-Indolepropionic acid

<b>Cat. No.:</b>	HY-W015229		
<b>CAS No.:</b>	830-96-6		
<b>Molecular Formula:</b>	C <sub>11</sub> H <sub>11</sub> NO <sub>2</sub>		
<b>Molecular Weight:</b>	189.21		
<b>Target:</b>	Endogenous Metabolite; Reactive Oxygen Species		
<b>Pathway:</b>	Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 100 mg/mL (528.51 mM)  
 H<sub>2</sub>O : 1 mg/mL (5.29 mM); ultrasonic and warming and heat to 80°C  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	5.2851 mL	26.4257 mL	52.8513 mL
	5 mM	1.0570 mL	5.2851 mL	10.5703 mL
	10 mM	0.5285 mL	2.6426 mL	5.2851 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: ≥ 2.5 mg/mL (13.21 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (13.21 mM); Clear solution

### BIOLOGICAL ACTIVITY

<b>Description</b>	3-Indolepropionic acid is shown to be a powerful antioxidant and has potential in the treatment for Alzheimer's disease.	
<b>IC<sub>50</sub> &amp; Target</b>	Microbial Metabolite	Human Endogenous Metabolite
<b>In Vitro</b>	3-Indolepropionic acid is shown to be a powerful antioxidant and has potential in the treatment for Alzheimer's disease <sup>[1]</sup> . 3-Indolepropionic acid is a more potent scavenger of hydroxyl radicals than melatonin. Similar to melatonin but unlike other antioxidants, 3-Indolepropionic acid scavenges radicals without subsequently generating reactive and pro-oxidant intermediate compounds <sup>[2]</sup> . It is also suggested that indolepropionic acid, a gut microbiota-produced metabolite, is a	

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potential biomarker for the development of type 2 diabetes (T2D) that may mediate its protective effect by preservation of  $\beta$ -cell function<sup>[3]</sup>.

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

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## REFERENCES

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- [1]. Wikoff WR, et al. Metabolomics analysis reveals large effects of gut microflora on mammalian blood metabolites. *Proc Natl Acad Sci U S A*. 2009 Mar 10;106(10):3698-703.
- [2]. Reiter RJ, et al. Reactive oxygen intermediates, molecular damage, and aging. Relation to melatonin. *Ann N Y Acad Sci*. 1998 Nov 20;854:410-24.
- [3]. de Mello VDet al. Indolepropionic acid and novel lipid metabolites are associated with a lower risk of type 2 diabetes in the Finnish Diabetes Prevention Study. *Sci Rep*. 2017 Apr 11;7:46337. doi: 10.1038/srep46337.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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