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Produktinformation

- Forschungsprodukte & Biochemikalien
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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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3-Indolepropionic acid

Cat. No.: HY-W015229

CAS No.: 830-96-6

Molecular Formula: $C_{11}H_{11}NO_2$

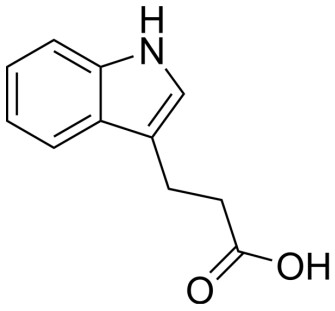
Molecular Weight: 189.21

Target: Endogenous Metabolite; Reactive Oxygen Species

Pathway: Metabolic Enzyme/Protease; Immunology/Inflammation; NF-κB

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 (528.51 mM)

H_2O : 1 mg/mL (5.29 mM; ultrasonic and warming and heat to 80°C)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	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

1. 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
2. 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

Description

3-Indolepropionic acid is shown to be a powerful antioxidant and has potential in the treatment for Alzheimer's disease.

IC_{50} & Target

Microbial Metabolite | Human Endogenous Metabolite

In Vitro

3-Indolepropionic acid is shown to be a powerful antioxidant and has potential in the treatment for Alzheimer's disease[1]. 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[2]. It is also suggested that indolepropionic acid, a gut microbiota-produced metabolite, is a

potential biomarker for the development of type 2 diabetes (T2D) that may mediate its protective effect by preservation of β-cell function[3].

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

CUSTOMER VALIDATION

- ACS Chem Neurosci. 2022 Sep 21.
- Research Square Preprint. 2023 Oct 31.

See more customer validations on www.MedChemExpress.com

REFERENCES

[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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