

Product Data Sheet

Product Name: 3-Hydroxyindole

Cat. No.: GC81430

Chemical Properties

Cas. No. 480-93-3

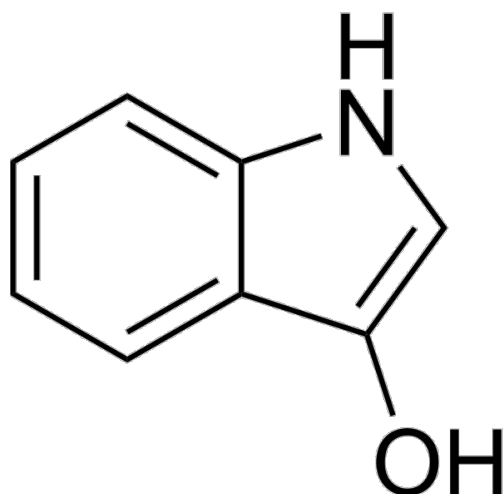
Formula C_8H_7NO M.Wt 133.15

Solubility DMSO: 2 mg/mL (15.02 mM; Need ultrasonic) Storage Store at $-20^{\circ}C$, protect from light, stored under nitrogen

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

3-Hydroxyindole is a hydroxyindole compound. 3-Hydroxyindole can be isolated from the fruits of *Aristotelia chilensis*. 3-Hydroxyindole inhibits Ferroptosis and scavenges DPPH free radicals. 3-Hydroxyindole protects against β -amyloid-induced toxicity. 3-Hydroxyindole exhibits antioxidant activity. 3-Hydroxyindole can be used in research related to neurodegenerative diseases [1] [2] [3].

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

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In Vitro, 3-Hydroxyindole potently scavenges DPPH radicals in a cell-free system with an IC₅₀ of 0.87 ppm, showing greater activity than α -tocopherol^[1]. 3-Hydroxyindole potently scavenges crocin radicals in a cell-free system with an IC₅₀ of 0.67 ppm^[1]. 3-Hydroxyindole potently inhibits lipid peroxidation in brain homogenate ex vivo with an IC₅₀ of 1.29 ppm^[1]. 3-Hydroxyindole (20 μ M; 22-24 h) potently inhibits ferroptosis induced by Erastin, RSL3, and FINO2 in HT-22 mouse hippocampal neurons, with EC₅₀ values of 7.9 μ M, 3.5 μ M, and 1.6 μ M respectively^[2]. 3-Hydroxyindole (25 μ M; 24 h) does not protect HT-22 mouse hippocampal neurons from non-ferroptotic toxicity induced by Rotenone, indicating its protective effects are specific to ferroptosis^[2]. 3-Hydroxyindole (24 h) potently inhibits ferroptosis induced by RSL3 and FINO2 in N27 rat dopaminergic neurons, with EC₅₀ values of 1.5 μ M and 2.2 μ M respectively^[2].

References:

- [1]. Céspedes CL, et al. Antioxidant activity of an unusual 3-hydroxyindole derivative isolated from fruits of *Aristotelia chilensis* (Molina) Stuntz. *Zeitschrift für Naturforschung. C, Journal of biosciences*. 2009;64(9-10):759-62.
- [2]. Jakaria M, et al. The role of hydroxyindoles in protecting neuronal cultures from ferroptosis. *Cell death discovery*. 2025 Jul 16;11(1):329.
- [3]. Jakaria M, et al. Inhibition of Ferroptotic Toxicity by 4-Hydroxyindole. *Chemical research in toxicology*. 2025 Nov 17;38(11):2002-2009.

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