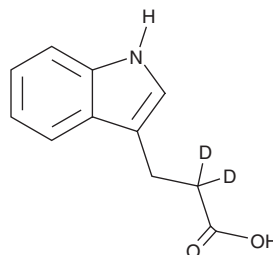


PRODUCT INFORMATION



Indole-3-propionic Acid-d₂ Item No. 43990

CAS Registry No.: 2469257-98-3
Formal Name: 1H-indole-3-d₂-propanoic acid
Synonym: 3-Indolepropionic Acid-d₂
MF: C₁₁H₉D₂NO₂
FW: 191.2
Chemical Purity: ≥98% (Indole-3-propionic Acid)
Deuterium
Incorporation: ≥99% deuterated forms (d₁-d₂); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Indole-3-propionic Acid-d₂ is intended for use as an internal standard for the quantification of indole-3-propionic acid (Item No. 28821) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Indole-3-propionic Acid-d₂ is supplied as a solid. A stock solution may be made by dissolving the indole-3-propionic acid-d₂ in the solvent of choice, which should be purged with an inert gas. Indole-3-propionic Acid-d₂ is soluble in DMSO.

Description

Indole-3-propionic acid is a bacterial metabolite that has antioxidant and neuroprotective activities.¹⁻³ It scavenges ABTS (Item No. 27317) radicals in a cell-free assay when used at concentrations ranging from 50 to 150 μM and decreases hydrogen peroxide-induced malondialdehyde (MDA) levels in rat striatal membranes (IC₅₀ = 180 μM).² Indole-3-propionic acid also reduces increases in MDA levels induced by amyloid β (1-42) (Item No. 20574) in PC12 cells.⁴ It decreases ischemia-induced increases in cell death of pyramidal neurons and levels of 4-hydroxy nonenal (HNE; Item No. 32100) and glial fibrillary acidic protein (GFAP) in the hippocampal CA1 region in gerbils when administered at a dose of 10 mg/kg per day.³

References

1. Wikoff, W.R., Anfora, A.T., Liu, J., *et al.* Metabolomics analysis reveals large effects of gut microflora on mammalian blood metabolites. *Proc. Natl. Acad. Sci. USA* **106**(10), 3698-3703 (2009).
2. Poeggeler, B., Pappolla, M.A., Hardeland, R., *et al.* Indole-3-propionate: A potent hydroxyl radical scavenger in rat brain. *Brain Res.* **815**(2), 382-388 (1999).
3. Hwang, I.K., Yoo, K.-Y., Li, H., *et al.* Indole-3-propionic acid attenuates neuronal damage and oxidative stress in the ischemic hippocampus. *J. Neurosci. Res.* **87**(9), 2126-2137 (2009).
4. Chyan, Y.-J., Poeggeler, B., Omar, R.A., *et al.* Potent neuroprotective properties against the Alzheimer β-amyloid by an endogenous melatonin-related indole structure, indole-3-propionic acid. *J. Biol. Chem.* **274**(31), 21937-21942 (1999).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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