

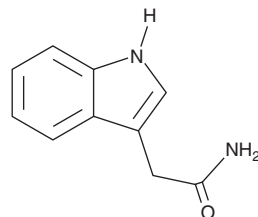
PRODUCT INFORMATION



Indole-3-acetamide

Item No. 34374

CAS Registry No.: 879-37-8
Formal Name: 1H-indole-3-acetamide
Synonyms: IAM, NSC 1969
MF: C₁₀H₁₀N₂O
FW: 174.2
Purity: ≥98%
UV/Vis.: λ_{max}: 220 nm
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-acetamide is supplied as a solid. A stock solution may be made by dissolving the indole-3-acetamide in the solvent of choice, which should be purged with an inert gas. Indole-3-acetamide is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of indole-3-acetamide in these solvents is approximately 30 mg/ml.

Indole-3-acetamide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, indole-3-acetamide should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Indole-3-acetamide has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Indole-3-acetamide is an endogenous metabolite of tryptophan and intermediate in the biosynthesis of the major plant, fungal, and bacterial auxin hormone, indole-3-acetic acid (IAA; Item No. 16954), in phytopathogenic bacteria.¹ It is formed directly from tryptophan in plants by tryptophan monooxygenase or, indirectly, through indole-3-acetonitrile or indole-3-acetaldoxime intermediates. Exogenous application of indole-3-acetamide (20 μM) increases the expression of *ami1*, the gene encoding amidase 1, the enzyme that catalyzes the synthesis of indole-3-acetic acid from indole-3-acetamide, in *Arabidopsis*.² It reduces relative primary root elongation in *Arabidopsis* mutants that have increased amidase activity and lower indole-3-acetamide levels, but not in wild-type *Arabidopsis*, when used at concentrations of 1 and 10 μM. Indole-3-acetamide inhibits mouse and rat liver, as well as *P. fluorescens* and tryptophan 2,3-dioxygenase but not rabbit intestine or mouse epididymis indoleamine 2,3-dioxygenase.³

References

1. Duca, D., Lörz, J., Patten, C.L., *et al.* Indole-3-acetic acid in plant-microbe interactions. *Anton. Van. Lee. J. M. S.* **106(1)**, 85-125 (2014).
2. Pérez-Alonso, M.-M., Ortiz-García, P., Moya-Cuevas, J., *et al.* Endogenous indole-3-acetamide levels contribute to the crosstalk between auxin and abscisic acid, and trigger plant stress responses in *Arabidopsis*. *J. Exp. Bot.* **72(2)**, 459-475 (2021).
3. Eguchi, N., Watanabe, Y., Kawanishi, K., *et al.* Inhibition of indoleamine 2,3-dioxygenase and tryptophan 2,3-dioxygenase by β-carboline and indole derivatives. *Arch. Biochem. Biophys.* **232(2)**, 602-609 (1984).

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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