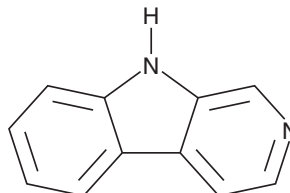


PRODUCT INFORMATION



Norharmane Item No. 20043

CAS Registry No.: 244-63-3
Formal Name: 9H-pyrido[3,4-b]indole
Synonyms: 2-Azacarbazole, β -Carboline, 2,9-Diazafluorene, NSC 84417
MF: $C_{11}H_8N_2$
FW: 168.2
Purity: $\geq 98\%$
UV/Vis.: λ_{max} : 213, 234, 289, 337, 351 nm
Supplied as: A crystalline 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

Norharmane is supplied as a crystalline solid. A stock solution may be made by dissolving the norharmane in the solvent of choice, which should be purged with an inert gas. Norharmane is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of norharmane in these solvents is approximately 1 mg/ml.

Norharmane is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Norharmane is a natural β -carboline first isolated from plants of the Zygophyllaceae family. It is a heterocyclic amine that may also be found in fried meats, tobacco smoke, and coffee.^{1,2} While not mutagenic by itself, norharmane is described as a co-mutagen, as it induces or enhances the mutagenicity of other compounds, commonly forming DNA adducts.³

References

1. Jamali, M. A., Zhang, Y., Teng, H., *et al.* Inhibitory effect of Rosa rugosa tea extract on the formation of heterocyclic amines in meat patties at different temperatures. *Molecules* **21**(2), 173 (2016).
2. Smith, T. T., Schaff, M. B., Rupprecht, L. E., *et al.* Effects of MAO inhibition and a combination of minor alkaloids, β -carbolines, and acetaldehyde on nicotine self-administration in adult male rats. *Drug Alcohol Depend.* (2015:155), 243-252 (2015).
3. Mori, M., Totsuka, Y., Fukutome, K., *et al.* Formation of DNA adducts by the co-mutagen norharman with aromatic amines. *Carcinogenesis* **17**(7), 1499-1503 (1996).

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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