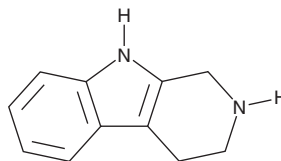


PRODUCT INFORMATION

1,2,3,4-Tetrahydro- β -carboline

Item No. 31220

CAS Registry No.: 16502-01-5
Formal Name: 2,3,4,9-tetrahydro-1H-pyrido[3,4-b]indole
Synonyms: Tetrahydronorharman, Tetrahydro- β -carboline, THBC, Tryptoline
MF: C₁₁H₁₂N₂
FW: 172.2
Purity: $\geq 95\%$
UV/Vis.: λ_{\max} : 221 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

1,2,3,4-Tetrahydro- β -carboline is supplied as a crystalline solid. A stock solution may be made by dissolving the 1,2,3,4-tetrahydro- β -carboline in the solvent of choice, which should be purged with an inert gas. 1,2,3,4-Tetrahydro- β -carboline is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 1,2,3,4-tetrahydro- β -carboline in these solvents is approximately 20 mg/ml.

1,2,3,4-Tetrahydro- β -carboline is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 1,2,3,4-tetrahydro- β -carboline should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 1,2,3,4-Tetrahydro- β -carboline has a solubility of approximately 0.33 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

1,2,3,4-Tetrahydro- β -carboline is a serotonin reuptake inhibitor ($IC_{50} = 7.4 \mu M$ in rat brain homogenates) and metabolite of tryptamine (Item No. 20995).¹ *In vivo*, 1,2,3,4-tetrahydro- β -carboline (20 and 40 μg /animal, i.c.v.) reduces serotonin levels in rat forebrain. It induces serotonin-mediated hyperactivity syndrome (HHS) in rats ($ED_{50} = 48$ mg/kg).² 1,2,3,4-Tetrahydro- β -carboline (6.25-75 mg/kg) also reduces acetic acid-induced writhing in rats.³

References

1. Rommelspacher, H., Bade, P., Coper, H., *et al.* Inhibition of the reuptake of serotonin by tryptoline. *Naunyn Schmiedebergs Arch. Pharmacol.* **292**(1), 93-95 (1976).
2. Pannier, L. and Rommelspacher, H. Actions of tetrahydronorharmane (tetrahydro- β -carboline) on 5-hydroxytryptamine and dopamine mediated mechanisms. *Neuropharmacology* **20**(1), 1-8 (1981).
3. Rommelspacher, H., Kauffmann, H., Cohnitz, C.H., *et al.* Pharmacological properties of tetrahydronorharmane (tryptoline). *Naunyn Schmiedebergs Arch. Pharmacol.* **298**(2), 83-91 (1977).

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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