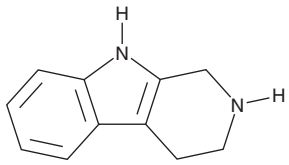
PRODUCT INFORMATION

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: $C_{11}H_{12}N_2$
FW: 172.2
Purity: ≥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 µM 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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM