

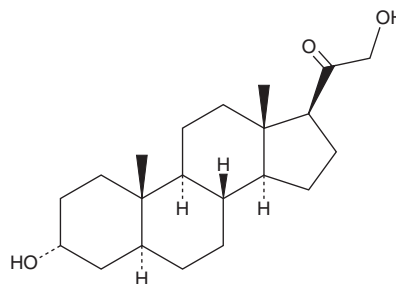
PRODUCT INFORMATION



3 α ,5 α -THDOC

Item No. 28364

CAS Registry No.: 567-02-2
Formal Name: (3 α ,5 α)-3,21-dihydroxy-pregnan-20-one
Synonyms: 3 α ,5 α -THDOC,
3 α ,5 α -Tetrahydrodeoxycorticosterone,
5 α ,3 α -THDOC, NSC 113927
MF: C₂₁H₃₄O₃
FW: 334.5
Purity: \geq 95%
Supplied as: A solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

3 α ,5 α -THDOC is supplied as a solid. A stock solution may be made by dissolving the 3 α ,5 α -THDOC in the solvent of choice, which should be purged with an inert gas. 3 α ,5 α -THDOC is soluble in organic solvents such as ethanol and DMSO. The solubility of 3 α ,5 α -THDOC in these solvents is approximately 100 mM.

Description

3 α ,5 α -THDOC is a neurosteroid and positive allosteric modulator of GABA_A receptors.¹ It inhibits binding of the convulsant *t*-butylbicyclophosphorothionate (TBPS) and increases binding of the benzodiazepine flunitrazepam to rat synaptosomal membrane preparations in a concentration-dependent manner.² 3 α ,5 α -THDOC potentiates GABA-induced chloride currents in cultured rat hippocampal and spinal cord neurons. It inhibits seizures induced by pilocarpine or pentylenetetrazol (PTZ; Item No. 18682) in mice (ED₅₀s = 7.3 and 15 mg/kg, respectively).³ 3 α ,5 α -THDOC (20 mg/kg) increases the number of entries into and percentage of time spent in the open arms of the elevated plus maze in mice, indicating anxiolytic activity.⁴

References

1. Usami, N., Yamamoto, T., Shintani, S., *et al.* Substrate specificity of human 3(20 α)-hydroxysteroid dehydrogenase for neurosteroids and its inhibition by benzodiazepines. *Biol. Pharm. Bull.* **25(4)**, 441-445 (2002).
2. Majewska, M.D., Harrison, N.L., Schwartz, R.D., *et al.* Steroid hormone metabolites are barbiturate-like modulators of the GABA receptor. *Science* **232(4753)**, 1004-1007 (1986).
3. Kokate, T.G., Cohen, A.L., Karp, E., *et al.* Neuroactive steroids protect against pilocarpine- and kainic acid-induced limbic seizures and status epilepticus in mice. *Neuropharmacology* **35(8)**, 1049-1056 (1996).
4. Rodgers, R.J. and Johnson, N.J. Behaviorally selective effects of neuroactive steroids on plus-maze anxiety in mice. *Pharmacol. Biochem. Behav.* **59(1)**, 221-232 (1998).

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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