

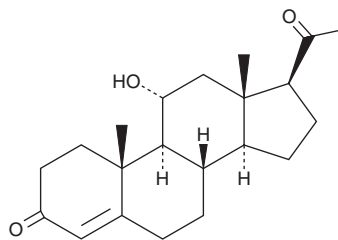
PRODUCT INFORMATION



11 α -Hydroxyprogesterone

Item No. 35898

CAS Registry No.: 80-75-1
Formal Name: 11 α -hydroxy-pregn-4-ene-3,20-dione
Synonyms: 11 α -OHP, NSC 3350, U-0384
MF: C₂₁H₃₀O₃
FW: 330.5
Purity: $\geq 98\%$
Supplied as: A solid
Storage: -20°C
Stability: 4 \geq years



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

Laboratory Procedures

11 α -Hydroxyprogesterone (11 α -OHP) is supplied as a solid. A stock solution may be made by dissolving the 11 α -OHP in the solvent of choice, which should be purged with an inert gas. 11 α -OHP is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Description

11 α -OHP is an inhibitor of 11 β -hydroxysteroid dehydrogenase (IC₅₀s = 0.63 and 0.4 μ M for recombinant human 11 β -HSD1 and 11 β -HSD2, respectively) and a derivative of the endogenous hormone progesterone (Item No. 15876).^{1,2} 11 α -OHP (10, 100, and 500 μ g/animal) reduces urinary sodium excretion in male adrenalectomized rats when administered in combination with the steroid hormone corticosterone (Item No. 16063) but not when administered alone.¹ It potentiates corticosterone-induced increases in urinary potassium excretion in the same model but has no effect on urinary potassium excretion when administered alone. 11 α -OHP increases blood pressure in rats when administered subcutaneously at a rate of 10 μ g/hour, an effect that can be blocked by adrenalectomy or reduced by co-administration of the mineralocorticoid receptor antagonist RU-28318.³ It has been used as a precursor in the synthesis of various steroids, including 11 β -aminoprogesterone and derivatives of 11 β -aminoprogesterone and 5 ζ -pregnanolone.^{2,4}

References

1. Souness, G.W., Latif, S.A., Laurenzo, J.L., *et al.* 11 α - and 11 β -hydroxyprogesterone, potent inhibitors of 11 β -hydroxysteroid dehydrogenase (isoforms 1 and 2), confer marked mineralocorticoid activity on corticosterone in the ADX rat. *Endocrinology* **136**(4), 1809-1812 (1995).
2. Pandya, K., Dietrich, D., Seibert, J., *et al.* Synthesis of sterically encumbered 11 β -aminoprogesterone derivatives and evaluation as 11 β -hydroxysteroid dehydrogenase inhibitors and mineralocorticoid receptor antagonists. *Bioorg. Med. Chem.* **21**(21), 6274-6281 (2013).
3. Souness, G.W., and Morris, D.J. 11 α - and 11 β -hydroxyprogesterone, potent inhibitors of 11 β -hydroxysteroid dehydrogenase, possess hypertensinogenic activity in the rat. *Hypertension* **27**(3 Pt 1), 421-425 (1996).
4. Slavíková, B., Bujons, J., Matyáš, L., *et al.* Allopregnanolone and pregnanolone analogues modified in the C ring: Synthesis and activity. *J. Med. Chem.* **56**(6), 2323-2336 (2013).

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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