

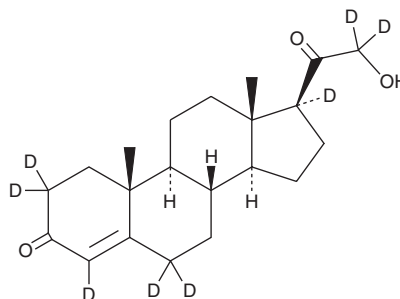
PRODUCT INFORMATION



11-deoxy Corticosterone-d₈

Item No. 45692

CAS Registry No.: 55487-63-3
Formal Name: 21-hydroxy-pregn-4-ene-3,20-dione-2,2,4,6,6,17,21,21-d₈
Synonyms: DOC-d₈, 21-Hydroxyprogesterone-d₈
MF: C₂₁H₂₂D₈O₃
FW: 338.5
Chemical Purity: ≥95% (11-deoxy Corticosterone)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
Supplied as: A 1 mg/ml solution in ethanol
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

11-deoxy Corticosterone-d₈ is intended for use as an internal standard for the quantification of 11-deoxy Corticosterone (Item No. 22916) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

11-deoxy Corticosterone (DOC) is an endogenous mineralocorticoid synthesized in the zona fasciculata and zona glomerulosa of the adrenal gland.¹ It is a metabolite of progesterone (Item No. 15876) and precursor to aldosterone (Item No. 15273) and corticosterone (Item No. 16063).² DOC is metabolized to the neuroactive compound (3α,5α)-2,21-dihydroxypregnan-20-one (THDOC), which positively modulates GABAA receptors and produces effects similar to barbiturates in rats.³ Injections of naloxone and corticotropin-releasing hormone (CRH) increase, while dexamethasone decreases, DOC in cynomolgus monkeys.⁴ DOC levels are increased 3.4-fold in obese and diabetic mice.²

References

1. Jimenez, V.A., Porcu, P., Morrow, A.L., *et al.* Adaptations in basal and hypothalamic-pituitary-adrenal-activated deoxycorticosterone responses following ethanol self-administration in cynomolgus monkeys. *Front. Endocrinol. (Lausanne)* **8**(19), (2017).
2. Hofmann, A., Peitzsch, M., Brunssen, C., *et al.* Elevated steroid hormone production in the db/db mouse model of obesity and type 2 diabetes. *Horm. Metab. Res.* **49**(1), 43-49 (2017).
3. 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).
4. Jimenez, V.A., Porcu, P., Morrow, A.L., *et al.* Adaptations in basal and hypothalamic-pituitary-adrenal-activated deoxycorticosterone responses following ethanol self-administration in cynomolgus monkeys. *Front. Endocrinol. (Lausanne)* **8**(19), (2017).

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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