

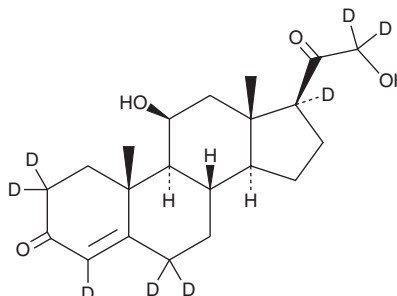
# PRODUCT INFORMATION



## Corticosterone-d<sub>8</sub>

Item No. 28524

**CAS Registry No.:** 1271728-07-4  
**Formal Name:** (11β)-11,21-dihydroxy-pregn-4-ene-3,20-dione-2,2,4,6,6,17,21,21-d<sub>8</sub>  
**Synonyms:** 17-deoxy Cortisol-d<sub>8</sub>, 11β,21-DHP-d<sub>8</sub>, 11β,21-dihydroxy Progesterone-d<sub>8</sub>  
**MF:** C<sub>21</sub>H<sub>22</sub>D<sub>8</sub>O<sub>4</sub>  
**FW:** 354.5  
**Chemical Purity:** ≥98% (Corticosterone)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>8</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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

Corticosterone-d<sub>8</sub> is intended for use as an internal standard for the quantification of corticosterone (Item No. 16063) 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).

Corticosterone-d<sub>8</sub> is supplied as a solid. A stock solution may be made by dissolving the corticosterone-d<sub>8</sub> in the solvent of choice, which should be purged with an inert gas. Corticosterone-d<sub>8</sub> is slightly soluble in ethanol and methanol.

### Description

Corticosterone is a steroid hormone produced in the cortex of the adrenal glands that binds to both glucocorticoid and mineralocorticoid receptors.<sup>1</sup> It is produced in response to adrenocorticotrophic hormone (ACTH) and is the precursor to aldosterone synthesis.<sup>2</sup> Since the production of glucocorticoids is increased by stress, it is often used as a biomarker of stress.<sup>3</sup> Plasma corticosterone levels have a circadian variation and corticosterone may be important in the regulation of the sleep-wake cycle.<sup>4,5</sup>

### References

1. Lu, N.Z., Wardell, S.E., Burnstein, K.L., *et al. Pharmacol. Rev.* **58(4)**, 782-797 (2006).
2. Palme, R., Rettenbacher, C., Touma, C., *et al. Ann. N.Y. Acad. Sci.* **1040(21)**, 162-71 (2005).
3. Goymann, W., Möstl, E., and Gwinner, E. *Auk* **119(4)**, 1167-1173 (2002).
4. Vázquez-Palacios, G., Retana-Márquez, S., Bonilla-Jaime, H., *et al. Pharmacol. Biochem. Behav.* **70(2-3)**, 305-310 (2001).
5. Millspaugh, J.J., Washburn, B.E., Milanick, M.A., *et al. Wildl. Soc. Bull.* **31(2)**, 399-406 (2003).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2022

#### 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