

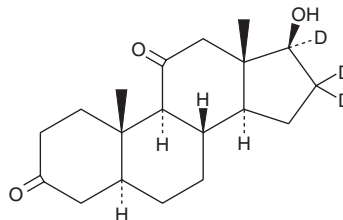
# PRODUCT INFORMATION



## 5 $\alpha$ -dihydro-11-keto Testosterone-d<sub>3</sub>

Item No. 9002761

**CAS Registry No.:** 2479914-02-6  
**Formal Name:** (5 $\alpha$ ,17 $\beta$ )-17-hydroxy-androstane-3,11-dione-16,16,17-d<sub>3</sub>  
**Synonyms:** 5 $\alpha$ -Androstane-3,11-dione-17 $\beta$ -ol-d<sub>3</sub>, 17 $\beta$ -hydroxy-5 $\alpha$ -Androstane-3,11-dione-d<sub>3</sub>, 11-keto Dihydrotestosterone-d<sub>3</sub>  
**MF:** C<sub>19</sub>H<sub>25</sub>D<sub>3</sub>O<sub>3</sub>  
**FW:** 307.4  
**Chemical Purity:**  $\geq$ 98% (5 $\alpha$ -dihydro-11-keto Testosterone)  
**Deuterium Incorporation:**  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>);  $\leq$ 1% d<sub>0</sub>  
**Supplied as:** A crystalline 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

5 $\alpha$ -dihydro-11-keto Testosterone-d<sub>3</sub> is intended for use as an internal standard for the quantification of 5 $\alpha$ -dihydro-11-keto testosterone (Item No. 20200) 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).

5 $\alpha$ -dihydro-11-keto Testosterone-d<sub>3</sub> is supplied as a crystalline solid. A stock solution may be made by dissolving the 5 $\alpha$ -dihydro-11-keto testosterone-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. 5 $\alpha$ -dihydro-11-keto Testosterone-d<sub>3</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 5 $\alpha$ -dihydro-11-keto testosterone-d<sub>3</sub> in ethanol and DMF is approximately 20 mg/ml and approximately 30 mg/ml in DMSO.

### Description

5 $\alpha$ -dihydro-11-keto Testosterone is a metabolite of 11 $\beta$ -hydroxyandrostenedione and 11 $\beta$ -hydroxytestosterone that has been shown to act as a full androgen receptor agonist with equal potency as that of dihydrotestosterone (Item No. 15874).<sup>1-3</sup> The androgenic activity of 5 $\alpha$ -dihydro-11-keto testosterone has been implicated in contributing to the androgen pool that drives castration-resistant prostate cancer cells.<sup>2,3</sup>

### References

1. Bloem, L. M., Storbeck, K. H., Schloms, L., *et al.* 11 $\beta$ -Hydroxyandrostenedione returns to the steroid arena: Biosynthesis, metabolism and function. *Molecules* **18(11)**, 13228-13244 (2013).
2. Swart, A. C., and Storbeck, K. H., 11 $\beta$ -Hydroxyandrostenedione: Downstream metabolism by 11 $\beta$ HSD, 17 $\beta$ HSD and SRD5A produces novel substrates in familiar pathway. *Mol. Cell. Endocrinol.* **408**, 114-123 (2015).
3. Storbeck, K. H., Bloem, L. M., Africander, D., *et al.* 11 $\beta$ -Hydroxydihydrotestosterone and 11-ketodihydrotestosterone, novel C19 steroids with androgenic activity: A putative role in castration resistant prostate cancer? *Mol. Cell. Endocrinol.* **377(1-2)**, 135-146 (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.

#### WARRANTY AND LIMITATION OF REMEDY

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