

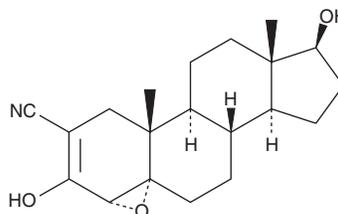
# PRODUCT INFORMATION



## Trilostane

Item No. 14164

**CAS Registry No.:** 13647-35-3  
**Formal Name:** 4 $\alpha$ ,5 $\alpha$ -epoxy-3,17 $\beta$ -dihydroxy-androst-2-ene-2-carbonitrile  
**Synonyms:** Desopan, Modrefen, Vetoryl, WIN 24,540  
**MF:** C<sub>20</sub>H<sub>27</sub>NO<sub>3</sub>  
**FW:** 329.4  
**Purity:**  $\geq$ 98%  
**UV/Vis.:**  $\lambda_{\text{max}}$ : 252 nm  
**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

Trilostane is supplied as a crystalline solid. A stock solution may be made by dissolving the trilostane in the solvent of choice, which should be purged with an inert gas. Trilostane is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of trilostane in these solvents is approximately 16 and 20 mg/ml, respectively.

Trilostane is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, trilostane should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Trilostane has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

$3\beta$ -hydroxysteroid dehydrogenase ( $3\beta$ -HSD) type 1 and type 2 isoforms are key enzymes for the biosynthesis of all active steroid hormones.  $3\beta$ -HSD1 (type 1) is expressed in placenta and peripheral tissues including breast tumors, whereas  $3\beta$ -HSD2 (type 2) is expressed in the adrenal gland, ovary, and testis. Trilostane is an inhibitor of the  $3\beta$ -HSDs:  $3\beta$ -HSD1 and  $3\beta$ -HSD2 with  $K_i$  values of 0.10 and 1.60  $\mu$ M, respectively.<sup>1</sup> Trilostane has been approved for use in the treatment of Cushing's syndrome in dogs to reduce cortisol, aldosterone, and corticosterone levels.<sup>2</sup> Because human  $3\beta$ -HSD (type 1) is a critical enzyme in the conversion of DHEA to estradiol in breast tumors, trilostane is also of interest for the treatment of breast cancer in postmenopausal women.<sup>3</sup>

### References

1. Thomas, J.L., Mack, V.L., Glow, J.A., et al. Structure/function of the inhibition of human  $3\beta$ -hydroxysteroid dehydrogenase type 1 and type 2 by trilostane. *J. Steroid Biochem. Mol. Biol.* **111**(1-2), 66-73 (2008).
2. Machida, T., Uchida, E., Matsuda, K., et al. Aldosterone-, corticosterone- and cortisol-secreting adrenocortical carcinoma in a dog: Case report. *J. Vet. Med. Sci.* **70**(3), 317-320 (2008).
3. Thomas, J.L., Bucholtz, K.M., and Kacsoh, B. Selective inhibition of human  $3\beta$ -hydroxysteroid dehydrogenase type 1 as a potential treatment for breast cancer. *J. Steroid Biochem. Mol. Biol.* **125**(1-2), 57-65 (2011).

#### 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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