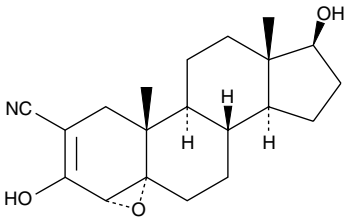
# Product Information

## Trilostane

*Item No. 14164*

**CAS Registry No.:** 13647-35-3
**Formal Name:** 4α,5α-epoxy-3,17β-dihydroxy-androst-2-ene-2-carbonitrile
**Synonyms:** Desopan, Modrefen, Vetoryl, WIN 24,540
**MF:** $C_{20}H_{27}NO_3$
**FW:** 329.4
**Purity:** ≥98%
**Stability:** ≥2 years at -20°C
**Supplied as:** A crystalline solid
**UV/Vis.:** $\lambda_{max}$: 252 nm




### Laboratory Procedures

For long term storage, we suggest that trilostane be stored as supplied at -20°C. It should be stable for at least two years.

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

3β-hydroxysteroid dehydrogenase (3β-HSD) type 1 and type 2 isoforms are key enzymes for the biosynthesis of all active steroid hormones. 3β-HSD1 (type I) is expressed in placenta and peripheral tissues including breast tumors, whereas 3β-HSD2 (type 2) is expressed in the adrenal gland, ovary, and testis. Trilostane is an inhibitor of the 3β-HSDs: 3β-HSD1 and 3β-HSD2 with $K_i$ values of 0.10 and 1.60 µM, respectively.[1] Trilsotane has been approved for use in the treatment of Cushing's syndrome in dogs to reduce cortisol, aldosterone, and corticosterone levels.[2] Because human 3β-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.[3]

### References


1. Thomas, J.L., Mack, V.L., Glow, J.A., *et al.* Structure/function of the inhibition of human 3β-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 3β-hydroxysteroid dehydrogenase type 1 as a potential treatment for breast cancer. *J. Steroid Biochem. Mol. Biol.* **125(1-2)**, 57-65 (2011).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***Cayman Chemical***

**Mailing address**
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

**Phone**
(800) 364-9897
(734) 971-3335

**Fax**
(734) 971-3640

**E-Mail**
custserv@caymanchem.com

**Web**
www.caymanchem.com