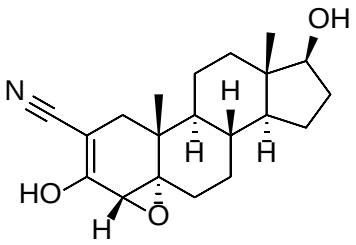
Product data sheet

MedKoo Cat#: 203020 Name: Trilostane CAS#: 13647-35-3 Chemical Formula: $C_{20}H_{27}NO_3$ Exact Mass: 329.1991 Molecular Weight: 329.43	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
Trilostane is an inhibitor of 3β-hydroxysteroid dehydrogenase used in the treatment of Cushing's syndrome. It was withdrawn from the United States market in April 1994. However, it was recently approved in 2008 for the treatment of Cushing's disease (hyperandrenocorticism) in dogs. It is also the first drug approved to treat both pituitary- and adrenal-dependent Cushing's in dogs. This prescription drug works by stopping the production of cortisol in the adrenal glands.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	45.67	138.63
DMF	20.0	60.71
DMF:PBS (pH 7.2) (1:1)	0.50	1.52

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	3.04 mL	15.18 mL	30.36 mL
5 mM	0.61 mL	3.04 mL	6.07 mL
10 mM	0.30 mL	1.52 mL	3.04 mL
50 mM	0.06 mL	0.30 mL	0.61 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Ouschan C, Lepschy M, Zeugswetter F, Möstl E. The influence of trilostane on steroid hormone metabolism in canine adrenal glands and corpora lutea-an in vitro study. Vet Res Commun. 2012 Mar;36(1):35-40. doi: 10.1007/s11259-011-9509-3. Epub 2011 Nov 25. PMID: 22113849.

In vivo study

1. Tung D, Ciallella J, Hain H, Cheung PH, Saha S. Possible therapeutic effect of trilostane in rodent models of inflammation and nociception. Curr Ther Res Clin Exp. 2013 Dec;75:71-6. doi: 10.1016/j.curtheres.2013.09.004. PMID: 24465047; PMCID: PMC3898193.

7. Bioactivity
Biological target: Trilostane(Win 24540; Modrastane) is an inhibitor of 3 β-hydroxysteroid dehydrogenase.

In vitro activity

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The influence of trilostane on steroid hormone metabolism in dogs was investigated by means of an in vitro model. Canine adrenal glands from freshly euthanized dogs and corpora lutea (CL) were incubated with increasing doses of trilostane. Tritiated P5 or DHEA were used as substrates. The resulting radioactive metabolites were extracted, separated by thin layer chromatography and visualized by autoradiography. A wide variety of radioactive metabolites were formed in the adrenal glands and in the CL, indicating high metabolic activity in both tissues. In the adrenal cortex, trilostane influences the P5 metabolism in a dose- and time-dependent manner, while DHEA metabolism and metabolism of both hormones in the CL were unaffected. The results indicate for the first time that there might be more than one enzyme of 3β-HSD present in dogs and that trilostane selectively inhibits P5 conversion to P4 only in the adrenal gland.

Reference: Vet Res Commun. 2012 Mar;36(1):35-40. https://link.springer.com/article/10.1007%2Fs11259-011-9509-3

In vivo activity

The immunomodulatory effects of trilostane were examined in a contact hypersensitivity model induced by DNFB (2,4-dinitrofluorobenzene). The animals were sensitized to DNFB and then challenged on the right ear 5 days later. Ear thickness increase was used as an end point. After the initial sensitization, there was no increase in the ear thickness. On challenge 5 days later, the DNFB-challenged animals that were treated with vehicle control experienced an increase in ear thickness of 76% to 0.34 mm. The trilostane-treated animals exhibited less swelling, with a maximum thickness of 0.27 mm at 48 hours. This finding constitutes a statistically significant 19% reduction ($P < 0.05$) compared with the vehicle-treated group.

Reference: Curr Ther Res Clin Exp. 2013 Dec;75:71-6. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3898193/