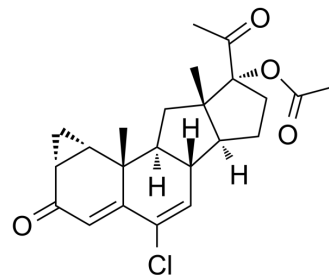


Cyproterone acetate

Cat. No.:	HY-13604		
CAS No.:	427-51-0		
Molecular Formula:	C ₂₃ H ₂₇ ClO ₄		
Molecular Weight:	402.91		
Target:	Androgen Receptor		
Pathway:	Vitamin D Related/Nuclear Receptor		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 33.33 mg/mL (82.72 mM; Need ultrasonic)
 Ethanol : 20 mg/mL (49.64 mM; Need ultrasonic)
 H₂O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.4819 mL	12.4097 mL	24.8194 mL
	5 mM	0.4964 mL	2.4819 mL	4.9639 mL
	10 mM	0.2482 mL	1.2410 mL	2.4819 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: Cremophor EL
Solubility: 12.5 mg/mL (31.02 mM); Clear solution; Need ultrasonic and warming and heat to 55°C
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (6.20 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (6.20 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (6.20 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: 2 mg/mL (4.96 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: 10% EtOH >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2 mg/mL (4.96 mM); Clear solution
- Add each solvent one by one: 10% EtOH >> 90% corn oil
Solubility: ≥ 2 mg/mL (4.96 mM); Clear solution

BIOLOGICAL ACTIVITY

Description	Cyproterone acetate is an anti-androgen (IC ₅₀ =7.1 nM) and progestogen synthetic steroid. Cyproterone acetate has affinity with progesteron and with glucocorticoidal receptors ^{[1][2]} .
In Vitro	Cyproterone acetate is a partial agonist, showing agonism for the AR, with EC ₅₀ of 4.0 μM, at relatively high concentrations ^[1] . Cyproterone acetate enhances TRAIL-induced androgen-independent prostate cancer cell apoptosis via up-regulation of death receptor 5 ^[3] . Cyproterone acetate pretreatment (0,1,10, or 50 μM; 24 hours; subsequently exposed to cadmium for an additional 24 hours) resulted in a clear decrease in the sensitivity to cadmium in rat liver epithelial cell line ^[4] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Adult male C57 BL/6J mice injected with 0.08 mg/g of cyproterone acetate showed an increase in cellular lipid content in the zona fasciculata and zona retjculans of the adrenal cortex ^[5] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Int J Mol Sci. 2019 Jul 5;20(13):3308.
- Katedra farmakologie a toxikologie. 2020 Jul.

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REFERENCES

- [1]. Sonneveld, E., et al., Development of androgen- and estrogen-responsive bioassays, members of a panel of human cell line-based highly selective steroid-responsive bioassays. Toxicol Sci, 2005. 83(1): p. 136-48.
- [2]. Torri V., Cyproterone acetate in the therapy of prostate carcinoma. Arch Ital Urol Androl. 2005;77(3):157-163.
- [3]. Chen L, et al. Cyproterone acetate enhances TRAIL-induced androgen-independent prostate cancer cell apoptosis via up-regulation of death receptor 5. BMC Cancer. 2017;17(1):179. Published 2017 Mar 7.
- [4]. Migally N. Effect of cyproterone acetate on the structure of the adrenal cortex. Arch Androl. 1979;2(2):109-115.
- [5]. Takiguchi M, et al. Cyproterone acetate induces a cellular tolerance to cadmium in rat liver epithelial cells involving reduced cadmium accumulation. Toxicology. 2001;165(1):13-25.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA