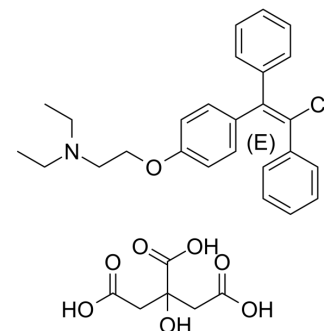


## Enclomiphene citrate

<b>Cat. No.:</b>	HY-118861A
<b>CAS No.:</b>	7599-79-3
<b>Molecular Formula:</b>	C <sub>32</sub> H <sub>36</sub> ClNO <sub>8</sub>
<b>Molecular Weight:</b>	598.08
<b>Target:</b>	Estrogen Receptor/ERR
<b>Pathway:</b>	Vitamin D Related/Nuclear Receptor
<b>Storage:</b>	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 50 mg/mL (83.60 mM)  
\* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	1.6720 mL	8.3601 mL	16.7202 mL
	5 mM	0.3344 mL	1.6720 mL	3.3440 mL
	10 mM	0.1672 mL	0.8360 mL	1.6720 mL

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

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 0.83 mg/mL (1.39 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 0.83 mg/mL (1.39 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 0.83 mg/mL (1.39 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Enclomiphene ((E)-Clomiphene) citrate is a potent and orally active non-steroidal estrogen receptor antagonist, with antioestrogenic property. Enclomiphene citrate can be used for the research of ovarian dysfunction, testosterone deficiency, male hypogonadism and type 2 diabetes<sup>[1]</sup>.

#### In Vitro

Enclomiphene citrate (0-100 μM, 6 h) dose-dependently inhibits basal and gonadotrophin-stimulated small and large ovine luteal cell progesterone secretion<sup>[2]</sup>.  
Enclomiphene citrate (0-100 μg/mL, 24 h) dose-dependently inhibits fertilization rates, blastocyst formation rates, and

degeneration rates in mouse oocytes<sup>[3]</sup>.  
Enclomiphene citrate (1 nM-10 μM, 6 h) dose-dependently decreases E2-induced inhibition of follicle stimulating hormone (FSH) secretion in primary sheep pituitary cells<sup>[4]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

#### In Vivo

Enclomiphene citrate (subcutaneous injection, 0.25 and 0.5 mg/animal, daily) inhibits spermatogenesis and decreases serum luteinizing hormone (LH) and testosterone levels in intact or castrated rats<sup>[5]</sup>.  
Enclomiphene citrate (oral administration, 0.03-3 mg/kg, daily for 90 days) reduces body weight to sham levels, and reduced serum cholesterol<sup>[6]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	21 days-old Charles River male rats <sup>[5]</sup>
Dosage:	0.25 and 0.5 mg/animal, daily for 24 days.
Administration:	Subcutaneous injection
Result:	Decreased LH and testosterone levels in the serum.

Animal Model:	OVX (ovariectomy) rat model <sup>[6]</sup>
Dosage:	0.03, 1, and 3 mg/kg, daily for 90 days.
Administration:	Oral administration
Result:	Reduced body weight to sham levels, and reduced serum cholesterol. Showed dose-dependent effects on the proximal tibia with BMD and BMC approaching posttreatment Sham levels.

## CUSTOMER VALIDATION

- Viruses. 2021 Jun 28;13(7):1255.

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## REFERENCES

- [1]. Rodriguez KM, et al. Enclomiphene citrate for the treatment of secondary male hypogonadism. *Expert Opin Pharmacother*. 2016 Aug;17(11):1561-7.
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- [3]. G E Schmidt, et al. The effects of enclomiphene and zuclomiphene citrates on mouse embryos fertilized in vitro and in vivo. *Am J Obstet Gynecol*. 1986 Apr;154(4):727-36.
- [4]. E S Huang, et al. Estrogenic and antiestrogenic effects of enclomiphene and zuclomiphene on gonadotropin secretion by ovine pituitary cells in culture. *Endocrinology*. 1983 Feb;112(2):442-8.
- [5]. R Weissenberg, et al. The effect of clomiphene citrate and its Zu or En isomers on the reproductive system of the immature male rat. *Andrologia*. 1992 May-Jun;24(3):161-5.
- [6]. R T Turner, et al. Differential responses of estrogen target tissues in rats including bone to clomiphene, enclomiphene, and zuclomiphene. *Endocrinology*. 1998

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

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