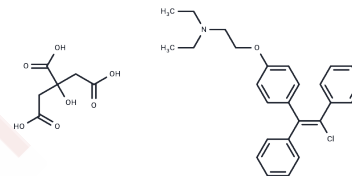


## Enclomiphene citrate

### Chemical Properties

CAS No. : 7599-79-3  
 Formula: C<sub>32</sub>H<sub>36</sub>ClNO<sub>8</sub>  
 Molecular Weight: 598.08  
 Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
*Actual storage temperature shall be subject to the COA.*



### Biological Description

Description	Enclomiphene citrate (trans-Clomiphene citrate) is a non-steroidal estrogen receptor antagonist, with antioestrogenic property
Targets(IC50)	Estrogen Receptor/ERR
In vivo	total testosterone (TT) levels increased between baseline and after 16 weeks of treatment in all the treatment groups. FSH and LH levels increased in the enclomiphene citrate groups and decreased in the testosterone gel group at 16 weeks. Enclomiphene citrate maintained sperm concentration in the normal range over the treatment period, while there was a marked reduction in spermatogenesis in the testosterone gel group [1].
Animal Research	Two parallel randomised, double-blind, double-dummy, placebo-controlled, multicentre, phase III studies were undertaken to evaluate two doses of enclomiphene citrate vs testosterone gel on total testosterone (TT), LH, FSH, and sperm counts in overweight men aged 18-60 years with secondary hypogonadism. Men were screened and enrolled in the trials (ZA-304 and ZA-305). All enrolled men had early morning serum TT levels in the low or low normal range ( $\leq 300$ ng/dL; $\leq 10.4$ nmol/L) and had low or normal LH ( $< 9.4$ IU/L) levels measured on two separate occasions 2-10 days apart. Serum samples were obtained over the course of the study to determine relevant hormone levels at baseline and after 16 weeks of treatment. Men provided semen samples twice to enroll at the beginning and twice at the end of the study[1].

### Solubility Information

Solubility	DMSO: 250 mg/mL (418 mM), Sonication is recommended. ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 1 mg/mL (1.67 mM), Sonication is recommended. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (16.72 mM), Solution. 10% DMSO+90% Saline: $< 10$ mg/mL (16.72 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may</i>

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In vivo Formulation	<i>vary and should be modified based on specific experimental conditions.</i>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.672 mL	8.3601 mL	16.7202 mL
5 mM	0.3344 mL	1.672 mL	3.344 mL
10 mM	0.1672 mL	0.836 mL	1.672 mL
50 mM	0.0334 mL	0.1672 mL	0.3344 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Kim E D , Mccullough A , Kaminetsky J . Oral enclomiphene citrate raises testosterone and preserves sperm counts in obese hypogonadal men, unlike topical testosterone: restoration instead of replacement[J]. BJU International, 2016, 117(4):677-685.

Kovac, Jason R . Reproductive endocrinology: Oral enclomiphene citrate in obese men with hypogonadism[J]. Nature Reviews Urology, 2016.

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