

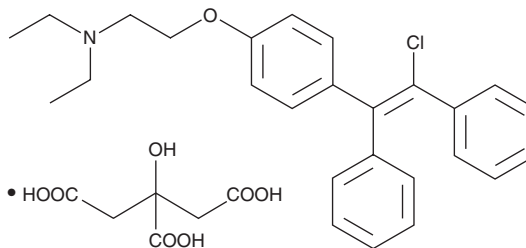
PRODUCT INFORMATION



Clomiphene (citrate)

Item No. 16087

CAS Registry No.: 50-41-9
Formal Name: 2-[4-(2-chloro-1,2-diphenylethenyl)phenoxy]-N,N-diethyl-ethanamine, 2-hydroxy-1,2,3-propanetricarboxylate
Synonyms: Clomifene, Omifin, NSC 35770
MF: C₂₆H₂₈ClNO • C₆H₈O₇
FW: 598.1
Purity: ≥98%
UV/Vis.: λ_{max}: 205, 236, 294 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Clomiphene (citrate) is supplied as a crystalline solid. A stock solution may be made by dissolving the clomiphene (citrate) in the solvent of choice, which should be purged with an inert gas. Clomiphene (citrate) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of clomiphene (citrate) in these solvents is approximately 25 and 30 mg/ml, respectively.

Clomiphene (citrate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, clomiphene (citrate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Clomiphene (citrate) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Clomiphene is a selective estrogen receptor modulator that impairs the activation of estrogen receptors (ERs) by 17β-estradiol.^{1,2} It potently binds both ERα and ERβ (K_i = 0.9 and 1.2 nM, respectively).³ Clomiphene enhances the release of gonadotropin-releasing hormone, stimulating the release of follicle-stimulating hormone and luteinizing hormone, culminating in ovulation.^{1,4}

References

1. Goldstein, S.R., Siddhanti, S., Ciaccia, A.V., *et al.* A pharmacological review of selective oestrogen receptor modulators. *Hum. Reprod. Update* **6(3)**, 212-224 (2000).
2. Amita, M., Takahashi, T., Tsutsumi, S., *et al.* Molecular mechanism of the inhibition of estradiol-induced endometrial epithelial cell proliferation by clomiphene citrate. *Endocrinology* **151(1)**, 394-405 (2010).
3. Kuiper, G.G.J.M., Carlsson, B., Grandien, K., *et al.* Comparison of the ligand binding specificity and transcript tissue distribution of estrogen receptors α and β. *Endocrinology* **138(3)**, 863-870 (1997).
4. Kousta, E., White, D.M., and Franks, S. Modern use of clomiphene citrate in induction of ovulation. *Hum. Reprod. Update* **3(4)**, 359-365 (1997).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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