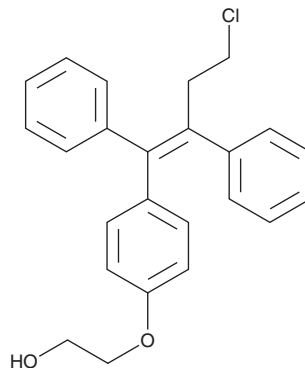


# PRODUCT INFORMATION



## Ospemifene Item No. 23755

**CAS Registry No.:** 128607-22-7  
**Formal Name:** 2-[4-[(1Z)-4-chloro-1,2-diphenyl-1-buten-1-yl]phenoxy]-ethanol  
**Synonym:** FC-1271a  
**MF:** C<sub>24</sub>H<sub>23</sub>ClO<sub>2</sub>  
**FW:** 378.9  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 240, 282 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

Ospemifene is supplied as a crystalline solid. A stock solution may be made by dissolving the ospemifene in the solvent of choice, which should be purged with an inert gas. Ospemifene is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ospemifene is approximately 1.5 mg/ml in ethanol and approximately 20 mg/ml in DMSO and DMF.

Ospemifene is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ospemifene should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ospemifene 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

Ospemifene is a non-hormonal selective estrogen receptor modulator (SERM).<sup>1</sup> It binds to estrogen receptor  $\alpha$  (ER $\alpha$ ) and ER $\beta$  (K<sub>d</sub>s = 380 and 410 nM, respectively). It increases vaginal weight and vaginal epithelial height (ED<sub>50</sub>s = 0.48 and 0.39 mg/kg per day, respectively) in an ovariectomized rat model of menopause. Ospemifene also increases progesterone receptor protein expression in vaginal epithelium and stroma and inhibits estrogen response element-mediated transactivation induced by 17 $\beta$ -estradiol (Item No. 10006315) in a reporter assay using MCF-7 cells. Formulations containing ospemifene have been used in the treatment of vulvar and vaginal atrophy-induced dyspareunia.

### Reference

1. Unkila, M., Kari, S., Yatkin, E., *et al.* Vaginal effects of ospemifene in the ovariectomized rat preclinical model of menopause. *J. Steroid Biochem. Mol. Biol.* **138**, 107-115 (2013).

#### 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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