

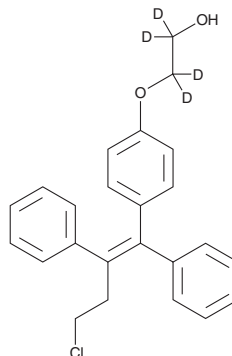
# PRODUCT INFORMATION



## Ospemifene-d<sub>4</sub>

Item No. 33465

**Formal Name:** 2-[4-[(1Z)-4-chloro-1,2-diphenyl-1-buten-1-yl]phenoxy]-ethanol-1,1,2,2-d<sub>4</sub>  
**Synonym:** FC-1271a-d<sub>4</sub>  
**MF:** C<sub>24</sub>H<sub>19</sub>ClD<sub>4</sub>O<sub>2</sub>  
**FW:** 382.9  
**Chemical Purity:** ≥98% (Ospemifene)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 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-d<sub>4</sub> is intended for use as an internal standard for the quantification of ospemifene (Item No. 23755) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Ospemifene-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the ospemifene-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Ospemifene-d<sub>4</sub> is soluble in acetonitrile.

### 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>s</sub> = 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., Yarkin, 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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