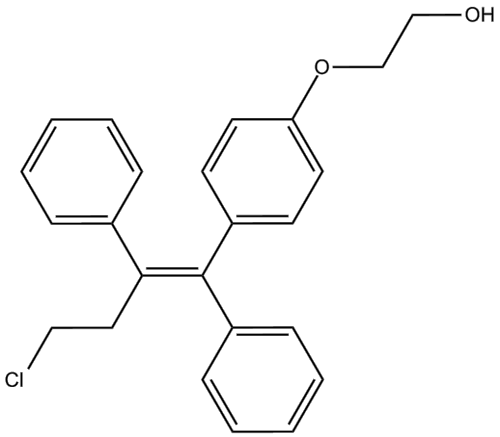
Product Data Sheet

Product Name: Ospemifene
Cat. No.: GC11996

Chemical Properties

Cas. No.	128607-22-7		
Chemical Name	2-[4-[(Z)-4-chloro-1,2-diphenylbut-1-enyl]phenoxy]ethanol		
SMILES	C1=CC=C(C=C1)C(=C(C2=CC=CC=C2)C3=CC=C(C=C3)OCCO)CCCl		
Formula	$C_{24}H_{23}ClO_2$	M.Wt	378.89
Solubility	≥ 15.4mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Ospemifene is a selective estrogen for the prevention of postmenopausal osteoporosis with IC50 values of 827nM and 1633nM for ERα and ERβ, respectively. target: ERα and ERβIC50:827 and 1633 nm for ERα and -β, respectively[1] IN vitro: The estrogen-dependent MCF-7 human breast cancer cells were used as a model for studies on the effects of Ospemifene on breast cancer cells. The addition of the compound at concentrations of 0.1 nm to 10 μm did not cause a significant

increase in MCF-7 cell growth in vitro when studied by measuring ATP or 3-[4,5-dimethylthiazol-2-yl]2,5-diphenyltetrazolium bromide levels, cell numbers, and rate of [3H]thymidine incorporation during a 7-day culture period. On the other hand, the compound did not inhibit the growth stimulation caused by 1 nm estradiol, except at a concentration 10 mm by only 30%. Similar results were obtained with ZR 75–1 cells, another estrogen-dependent human breast cancer cell line. The cytotoxicity of FC1271a at high concentrations was therefore markedly lower than that for TAM, TOR, or RAL.[1]In ER+ MCF-7 cells, TOR VI and FC-1271a exhibited anti-estrogenic activity. The anti-estrogenic effects of these compounds were less potent as anti-estrogens when compared with TOR and RAL.[2]"In vivo: In the DMBA rat mammary carcinoma model, Ospemifene showed a clear antitumor effect that seemed to be caused primarily by a decrease in the appearance of new tumors but also by a retardation of tumor progression without stimulating the growth of human breast cancer cells.[1]Tumor growth was shown to be inhibited at these doses, indicating anti-estrogenic activity at all doses including 50 and 100 mg/kg Ospemifene. By the end of treatment, MCF-7 tumors in Ospemifene treated mice were statistically smaller compared with control tumors.[2]

References:
[1]. Qiang Qv.et al.Selective estrogenic effects of a novel triphenylethylene compound, FC1271a, on bone, cholesterol level, and reproductive tissues in intact and ovariectomized rats. Endocrinology.Feb;141(2):809-20. 25. (2000).
[2]. Tracy L. Taras et al.In vitro and in vivo biologic effects of Ospemifene (FC-1271a) in breast cancer. The Journal of Steroid Biochemistry and Molecular Biology 77(4-5):271-9,(2001).