

Produktinformation



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PRODUCT INFORMATION



Fulvestrant

Item No. 10011269

CAS Registry No.: Formal Name:	129453-61-8 7α-[9-[(4,4,5,5,5-pentafluoropentyl)sulfinyl] nonyl]-estra-1.3.5(10)-triene-3.17β-diol	Н
Synonym:	ICI 182780	
MF:	C ₃₂ H ₄₇ F ₅ O ₃ S	но
FW:	606.8	
Purity:	≥98%	F F
UV/Vis.:	λ _{max} : 282 nm	
Supplied as:	A crystalline solid	F ₃ C
Storage:	-20°C	5
Stability:	≥2 years	

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

Laboratory Procedures

Fulvestrant is supplied as a crystalline solid. A stock solution may be made by dissolving the fulvestrant in an organic solvent purged with an inert gas. Fulvestrant is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of fulvestrant in these solvents is approximately 20 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Fulvestrant is a selective estrogen receptor degrader (SERD) that downregulates and degrades estrogen receptor α (ER α).^{1.2} It binds to rat uterine ER with an IC₅₀ value of 44.8 nM and prevents uterine weight increases induced by estradiol in immature rats (ED₅₀ = 0.06 mg/kg per day) but has no effect on uterine weight alone.³ It also decreases uterine weight in adult rats without affecting the production of luteinizing and follicle-stimulating hormones and prolactin. Fulvestrant inhibits the growth of ER-positive MCF-7 human breast cancer cells but not ER-negative BT-20 cells when used at a concentration of 1 μ g/ml. It also prevents tumor growth in MCF-7 and Br10 breast cancer mouse xenograft models when used at a single dose of 5 mg per animal. Fulvestrant is neuroprotective in vitro against neurotoxicity induced by glutamateand amyloid- β (1-42) (A β 42) in primary rat hippocampal cells.⁴ Formulations containing fulvestrant have been used in the treatment of estrogen-sensitive breast cancer.

References

- 1. Kansra, S., Yamagata, S., Sneade, L., et al. Differential effects of estrogen receptor antagonists on pituitary lactotroph proliferation and prolactin release. Mol. Cell. Endocrinol. 239(1-2), 27-36 (2005).
- 2. Wardell, S.E., Marks, J.R., and McDonnell, D.P. The turnover of estrogen receptor α by the selective estrogen receptor degrader (SERD) fulvestrant is a saturable process that is not required for antagonist efficacy. Biochem. Pharmacol. 82(2), 122-130 (2011).
- 3. Wakeling, A.E., Dukes, M., and Bowler, J. A potent specific pure antiestrogen with clinical potential. Cancer Res. 51(15), 3867-3873 (1991).
- Zhao, L., O'Neill, K., and Brinton, R.D. Estrogenic agonist activity of ICI 182,780 (Faslodex) in hippocampal 4. neurons: Implications for basic science understanding of estrogen signaling and development of estrogen modulators with a dual therapeutic profile. J. Pharmacol. Exp. Ther. 319(3), 1124-1132 (2006).

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

SAFFTY DATA

al 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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