



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Expressversand

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# PRODUCT INFORMATION



## Fulvestrant-d<sub>3</sub> Item No. 25413

**Formal Name:** (7R,8R,9S,13S,14S,17S)-13-methyl-7-(9-((4,4,5,5,5-pentafluoropentyl)sulfinyl)nonyl)-7,8,9,11,12,13,14,15,16,17-decahydro-6H-cyclopenta[a]phenanthrene-16,16,17-d<sub>3</sub>-3,17-diol

**MF:** C<sub>32</sub>H<sub>44</sub>D<sub>3</sub>F<sub>5</sub>O<sub>3</sub>S

**FW:** 609.8

**Chemical Purity:** ≥98% (Fulvestrant)

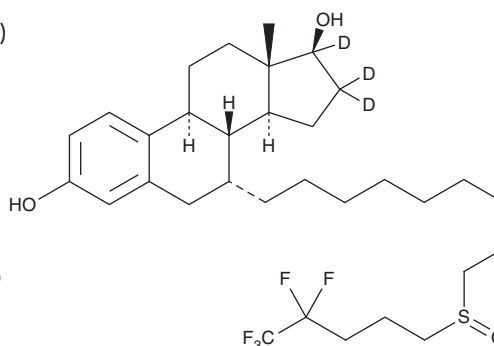
**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</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

Fulvestrant-d<sub>3</sub> is intended for use as an internal standard for the quantification of fulvestrant (Item No. 10011269) 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).

Fulvestrant-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the fulvestrant-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Fulvestrant-d<sub>3</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of fulvestrant-d<sub>3</sub> in ethanol and DMF is approximately 25 mg/ml and approximately 20 mg/ml in DMSO.

### Description

Fulvestrant is a selective estrogen receptor degrader (SERD) that downregulates and degrades estrogen receptor  $\alpha$  (ER $\alpha$ ).<sup>1,2</sup> It binds to rat uterine ER with an IC<sub>50</sub> value of 44.8 nM and prevents uterine weight increases induced by estradiol in immature rats (ED<sub>50</sub> = 0.06 mg/kg per day) but has no effect on uterine weight alone.<sup>3</sup> 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  $\mu$ 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 glutamate- and amyloid- $\beta$  (1-42) (A $\beta$ 42) in primary rat hippocampal cells.<sup>4</sup> Formulations containing fulvestrant have been used in the treatment of estrogen-sensitive breast cancer.

### References

1. Kansra, S., Yamagata, S., Sneade, L., et al. *Mol. Cell Endocrinol.* **239**(1-2), 27-36 (2005).
2. Wardell, S.E., Marks, J.R., and McDonnell, D.P. *Biochem. Pharmacol.* **82**(2), 122-130 (2011).
3. Wakeling, A.E., Dukes, M., and Bowler, J. *Cancer Res.* **51**(15), 3867-3873 (1991).
4. Zhao, L., O'Neill, K., and Brinton, R.D. *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.

#### 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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