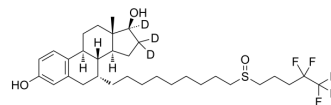


Fulvestrant-d₃

Cat. No.:	HY-13636S
Molecular Formula:	C ₃₂ H ₄₄ D ₃ F ₅ O ₃ S
Molecular Weight:	609.79
Target:	Estrogen Receptor/ERR; Autophagy; Apoptosis; Isotope-Labeled Compounds
Pathway:	Vitamin D Related/Nuclear Receptor; Autophagy; Apoptosis; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fulvestrant-d ₃ is the deuterium labeled Fulvestrant. Fulvestrant (ICI 182780) is a pure antiestrogen and a potent estrogen receptor (ER) antagonist with an IC ₅₀ of 9.4 nM. Fulvestrant is also a GPR30 agonist. Fulvestrant effectively inhibits the growth of ER-positive MCF-7 cells with an IC ₅₀ of 0.29 nM. Fulvestrant also induces autophagy and has antitumor efficacy[1].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Wakeling AE, et al. A potent specific pure antiestrogen with clinical potential. *Cancer Res.* 1991 Aug 1;51(15):3867-73.
- [3]. Osborne CK, et al. Fulvestrant: an oestrogen receptor antagonist with a novel mechanism of action. *Br J Cancer.* 2004 Mar;90 Suppl 1:S2-6.
- [4]. Garner F, et al. RAD1901: a novel, orally bioavailable selective estrogen receptor degrader that demonstrates antitumor activity in breast cancer xenograft models. *Anticancer Drugs.* 2015 Oct;26(9):948-56
- [5]. Yu X, et al. MiR-214 increases the sensitivity of breast cancer cells to tamoxifen and fulvestrant through inhibition of autophagy. *Mol Cancer.* 2015 Dec 15;14:208.
- [6]. Julia Kuhn, et al. GPR30 estrogen receptor agonists induce mechanical hyperalgesia in the rat. *Eur J Neurosci.* 2008 Apr;27(7):1700-9.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA