Bicalutamide-d_5

Cat. No.: HY-14249S1

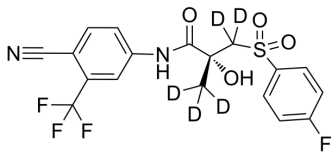
Molecular Formula: $C_{18}H_9D_5F_4N_2O_4S$

Molecular Weight: 435.4

Target: Androgen Receptor; Autophagy; Isotope-Labeled Compounds

Pathway: Vitamin D Related/Nuclear Receptor; Autophagy; Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Bicalutamide-d_5 is deuterated labeled Bicalutamide (HY-14249). Bicalutamide is an orally active non-steroidal androgen receptor (AR) antagonist. Bicalutamide can be used for the research of prostate cancer[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]. Bicalutamide competes with androgens for binding AR in in a whole-cell binding-assay (LNCaP/AR(cs) cells), with an IC_{50} of 160 nM[2]. Bicalutamide induces proliferation of VCaP cells in a dose-dependent manner, whereas partially antagonizes the effects of R1881 (synthetic androgen)[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Bicalutamide (10 mg/kg; i.g.; daily; for 28 days) exhibits anti-tumor activity in prostate cancer mice model[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Nicola J. Clegg,1 John Wongvipat,1,2 Jim Joseph, ARN-509: a novel anti-androgen for prostate cancer treatment. Cancer Res. 2012 March 15; 72(6): 1494-1503.

[2]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

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