

Product Data Sheet

Product Name: (R)-Bicalutamide

Cat. No.: GC61491

Chemical Properties

Cas. No. 113299-40-4

SMILES O=C(NC1=CC=C(C#N)C(C(F)(F)F)=C1)[C@@](C)(O)CS(=O)(C2=CC=C(F)C=C2)=O

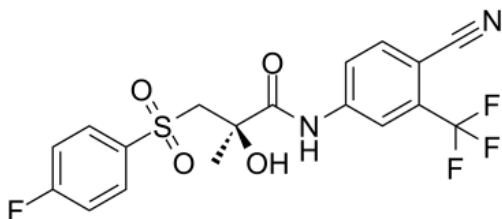
Formula $C_{18}H_{14}F_4N_2O_4S$ M.Wt 430.37

Solubility DMSO: 100 mg/mL (232.36 mM) 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

(R)-Bicalutamide is the (R)-enantiomer of Bicalutamide. (R)-Bicalutamide is an androgen receptor (AR) antagonist, with antineoplastic activity. (R)-Bicalutamide is widely used for the research of prostate cancer[1][2].

Bicalutamide is available as a racemic mixture. The R isomer (R-bicalutamide) has an ~30-fold higher binding affinity to the AR than the S isomer[1]. (R)-bicalutamide (0.02-20 µM) reduces naïve LNCaP cells survival in a dose-dependent[2]. Cell Proliferation Assay[2] Cell Line: LNCaP cells, LNCaP-Rbic

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

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cells

(R)-Bicalutamide (10 mg/kg; i.g.; daily; for 4 days) has antitumor efficacy in VCaP xenografts mice[3].
Animal Model: CD1 male nude (nu/nu) mice, with VCaP xenografts[3]

[1]. Hongli Liu, et al. Molecular mechanism of R-bicalutamide switching from androgen receptor antagonist to agonist induced by amino acid mutations using molecular dynamics simulations and free energy calculation. J Comput Aided Mol Des. 2016 Dec;30(12):1189-1200. [2]. Sara Pignatta, et al. Prolonged exposure to (R)-bicalutamide generates a LNCaP subclone with alteration of mitochondrial genome. Mol Cell Endocrinol. 2014 Jan 25;382(1):314-324. [3]. Anna Tesei, et al. Effect of Small Molecules Modulating Androgen Receptor (SARMs) in Human Prostate Cancer Models. PLoS One. 2013; 8(5): e62657.

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