Product Data Sheet

Product Name: Abiraterone-D4
Cat. No.: GC63469

Chemical Properties

Cas. No.	2122245-62-7		
Formula	$C_{24}H_{27}D_4NO$	M.Wt	353.53
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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	Abiraterone-D4		

Background

Abiraterone-D4 (CB-7598-D4) is the deuterium labeled Abiraterone. Abiraterone is a potent and irreversible CYP17A1 inhibitor with antiandrogen activity, which inhibits both the 17α-hydroxylase and 17,20-lyase activity of the cytochrome p450 enzyme CYP17 with IC50s of 2.5 nM and 15 nM, respectively.

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].

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216. [2]. Attard G, et al. Phase I clinical trial of a selective inhibitor of CYP17, abiraterone acetate, confirms that castration-resistant prostate cancer commonly remains hormone driven. J Clin Oncol. 2008 Oct 1;26(28):4563-71.;Richards J, et al. Interactions of abiraterone, eplerenone, and prednisolone with wild-type and mutant androgen receptor: a rationale for increasing abiraterone exposure or combining with MDV3100. Cancer Res. 2012 May 1;72(9):2176-82.;Stein MN, et al. Androgen synthesis inhibitors in the treatment of

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castration-resistant prostate cancer. Asian J Androl. 2014 May-Jun;16(3):387-400.;Li R, et al. Abiraterone inhibits 3β-hydroxysteroid dehydrogenase: a rationale for increasing drug exposure in castration-resistant prostate cancer. Clin Cancer Res. 2012 Jul 1;18(13):3571-9.;Kumar SV, et al. Validated RP-HPLC/UV method for the quantitation of abiraterone in rat plasma and its application to a pharmacokinetic study in rats. Biomed Chromatogr. 2013 Feb;27(2):203-7.;Stein MN, et al. Androgen synthesis inhibitors in the treatment of castration-resistant prostate cancer. Asian J Androl. 2014 May-Jun;16(3):387-400.

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