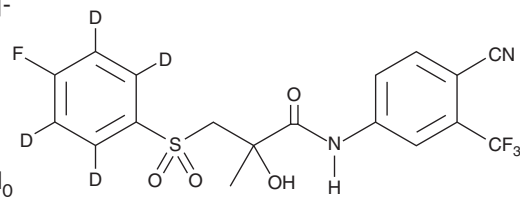
PRODUCT INFORMATION

Bicalutamide-d_4

Item No. 22377

CAS Registry No.: 1185035-71-5
Formal Name: N-[4-cyano-3-(trifluoromethyl)phenyl]-3-[(4-fluorophenyl-2,3,5,6-d_4)sulfonyl]-2-hydroxy-2-methyl-propanamide
MF: $C_{18}H_{10}D_4F_4N_2O_4S$
FW: 434.4
Chemical Purity: ≥98% (Bicalutamide)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solid
Storage: 4°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Bicalutamide-d_4 is intended for use as an internal standard for the quantification of bicalutamide (Item No. 14250) 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).

Bicalutamide-d_4 is supplied as a solid. A stock solution may be made by dissolving the bicalutamide-d_4 in the solvent of choice. Bicalutamide-d_4 is soluble in organic solvents such as methanol and DMSO, which should be purged with an inert gas.

Description

Bicalutamide is a non-steroidal androgen receptor antagonist that binds the androgen receptor (K_i = 12.5 µM; IC_{50} = 1.2 µM), preventing its activation and subsequent upregulation of androgen responsive genes by androgenic hormones.[1,2] Bicalutamide is frequently used to examine the role of androgen receptor inactivation in the proliferation of prostate cancer cells and has served as a molecular template for the design and structural optimization of more selective androgen receptor modulators for androgen therapy.[3,4]

References

1. Freeman, S.N., Mainwaring, W.I.P., and Furr, B.J.A. A possible explanation for the peripheral selectivity of a novel non-steroidal pure antiandrogen, Casodex (ICI 176,334). *Br. J. Cancer* **60(5)**, 664-668 (1989).
2. Masiello, D., Cheng, S., Bubley, G.J., *et al*. Bicalutamide functions as an androgen receptor antagonist by assembly of a transcriptionally inactive receptor. *J. Biol. Chem*. **277(29)**, 26321-26326 (2002).
3. Gao, W., Kim, J., and Dalton, J.T. Pharmacokinetics and pharmacodynamics of nonsteroidal androgen receptor ligands. *Pharm. Res*. **23(8)**, 1641-1658 (2006).
4. Yin, D., Perera, M.A., Dalton, J.T., *et al*. Key structural features of nonsteroidal ligands for binding and activation of the androgen receptor. *Mol. Pharmacol*. **63(1)**, 211-223 (2003).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM