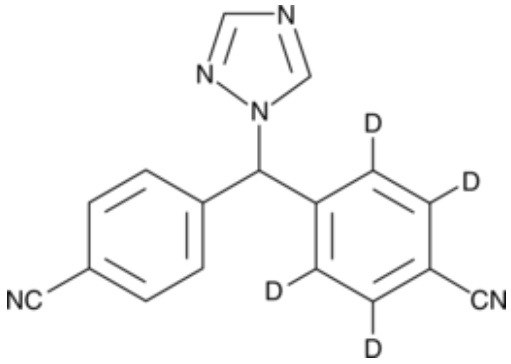
Product Data Sheet

Product Name: Letrozole-d4
Cat. No.: GC47554

Chemical Properties

Cas. No.	1133712-96-5		
SMILES	[2H]C(C([2H])=C(C#N)C([2H])=C1[2H])=C1C(N2C=NC=N2)C3=CC=C(C#N)C=C3		
Formula	C17H7D4N5	M.Wt	289.3
Solubility	DMF: 16 mg/ml,DMF:PBS (pH 7.2) (1:9): 0.1 mg/ml,DMSO: 16 mg/ml	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

Letrozole-d_4 is intended for use as an internal standard for the quantification of letrozole by GC- or LC-MS. Letrozole is a potent, cell-permeable inhibitor of aromatase (IC_{50} = 2 nM).[1] It inhibits proliferation of estrogen receptor-positive (ER^+) MCF-7 cells when used alone at concentrations ranging from 0.1 to 100 nM and when used at a concentration of 10 nM in combination with testosterone or 4-androstene-3,17-dione.[2] It also reduces matrix metalloproteinase-2 (MMP-2) and MMP-9 levels in MCF-7 cells when used at a concentration of 10 nM. Letrozole (10 µg per day) reduces tumor growth in an MCF-7Ca ovariectomized-mouse xenograft model.[3] Formulations

containing letrozole have been used in the treatment of postmenopausal breast cancer.[4]

1.Mayhoub, A.S., Marler, L., Kondratyuk, T.P., et al.Optimization of the aromatase inhibitory activities of pyridylthiazole analogues of resveratrolBioorg. Med. Chem.20(7)2427-2434(2012) 2.Mitropoulou, T.N., Tzanakakis, G.N., Kletsas, D., et al.Letrozole as a potent inhibitor of cell proliferation and expression of metalloproteinases (MMP-2 and MMP-9) by human epithelial breast cancer cellsInt. J. Cancer104(2)155-160(2003) 3.Long, B.J., Jelovac, D., Handratta, V., et al.Therapeutic strategies using the aromatase inhibitor letrozole and tamoxifen in a breast cancer modelJ. Natl. Cancer Inst.96(6)456-465(2004) 4.Cohen, M.H., Johnson, J.R., Li, N., et al.Approval summary: Letrozole in the treatment of postmenopausal women with advanced breast cancerClin Cancer Res.8(3)665-669(2002)