

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

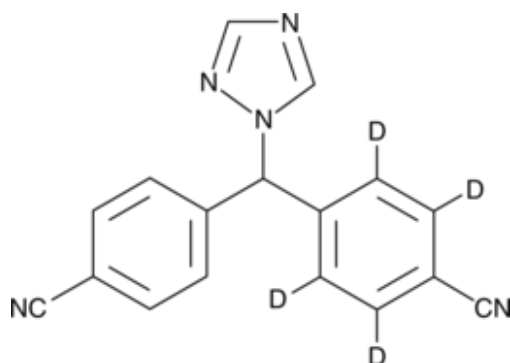
Formula C₁₇H₇D₄N₅ M.Wt 289.3

Solubility DMF: 16 mg/ml, DMF:PBS (pH 7.2) Storage Store at -20°C
(1:9): 0.1 mg/ml, DMSO: 16 mg/ml

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-d₄ 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 (IC₅₀ = 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

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

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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 resveratrol. *Bioorg. 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 cells. *Int. J. Cancer* 104(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 model. *J. 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 cancer. *Clin Cancer Res.* 8(3):665-669 (2002)

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