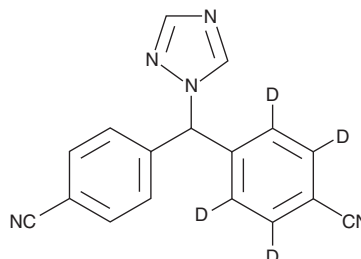


PRODUCT INFORMATION



Letrozole-d₄ Item No. 26517

CAS Registry No.: 1133712-96-5
Formal Name: 4-[(4-cyanophenyl)-1H-1,2,4-triazol-1-ylmethyl]-benzonitrile-2,3,5,6-d₄
MF: C₁₇H₇D₄N₅
FW: 289.3
Chemical Purity: ≥98% (Letrozole)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Letrozole-d₄ is intended for use as an internal standard for the quantification of letrozole (Item No. 11568) 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).

Letrozole-d₄ is supplied as a solid. A stock solution may be made by dissolving the letrozole-d₄ in the solvent of choice, which should be purged with an inert gas. Letrozole-d₄ is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of letrozole-d₄ in these solvents is approximately 16 mg/ml.

Description

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

References

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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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