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- Trockeneiszuschlag
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- Expressversand

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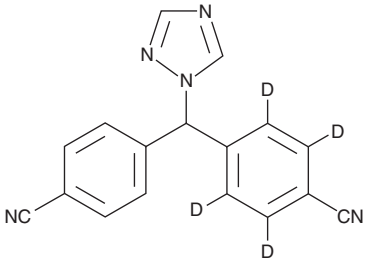
PRODUCT INFORMATION

Letrozole-d_4

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-d_4
MF:	$C_{17}H_7D_4N_5$
FW:	289.3
Chemical Purity:	≥98% (Letrozole)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as:	A solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

Letrozole-d_4 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-d_4 is supplied as a solid. A stock solution may be made by dissolving the letrozole-d_4 in the solvent of choice. Letrozole-d_4 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of letrozole-d_4 in these solvents is approximately 16 mg/ml.

Description

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]

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).

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