PRODUCT INFORMATION

Letrozole
Item No. 11568

CAS Registry No.: 112809-51-5
Formal Name: 4,4'-((1H-1,2,4-triazol-1-ylmethylene)bis-benzonitrile
Synonym: CGS 20267
MF: C_{17} H_{11} N_{5}
FW: 285.3
Purity: ≥98%
UV/Vis.: λ_{max}^\text{nm}: 239, 273 nm
Supplied as: A crystalline 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 is supplied as a crystalline solid. A stock solution may be made by dissolving the letrozole in the solvent of choice, which should be purged with an inert gas. Letrozole is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of letrozole in these solvents is approximately 16 mg/ml.

Letrozole is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, letrozole should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Letrozole has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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