(Z)-4-hydroxy Tamoxifen
Item No. 14854

CAS Registry No.: 68047-06-3
Formal Name: 4-[(1Z)-1-[4-[2-(dimethylamino)ethoxy]phenyl]-2-phenyl-1-buten-1-yl]-phenol
Synonyms: ICI 79280, trans-4-hydroxy Tamoxifen
MF: C26H29NO2
FW: 387.5
Purity: ≥98%
UV/Vis.: λmax: 246, 287 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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

Labratory Procedures

(Z)-4-hydroxy Tamoxifen is supplied as a crystalline solid. A stock solution may be made by dissolving the (Z)-4-hydroxy tamoxifen in the solvent of choice. (Z)-4-hydroxy Tamoxifen is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of (Z)-4-hydroxy tamoxifen in ethanol and DMF is approximately 20 mg/ml and approximately 2 mg/ml in DMSO.

(Z)-4-hydroxy Tamoxifen is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (Z)-4-hydroxy tamoxifen should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (Z)-4-hydroxy Tamoxifen has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

(Z)-4-hydroxy Tamoxifen is a major phase I metabolite of tamoxifen (Item No. 13258), a well-known estrogen receptor antagonist in breast but partial estrogen receptor agonist in endometrium. (Z)-4-hydroxy Tamoxifen is a product of cytochrome P450 (CYP)2D6 and CYP2B6 activity.1-3 The (Z), or trans, isomer of 4-hydroxy tamoxifen has at least a 100-fold higher affinity for estrogen receptors than tamoxifen.4

References