PRODUCT INFORMATION

4'-hydroxy Tamoxifen
Item No. 19519

CAS Registry No.: 82413-23-8
Formal Name: 4-[(1Z)-1-[[4-[2-(dimethylamino)ethoxy]phenyl]phenylmethylene]propyl]-phenol
MF: C_{26}H_{29}NO_2
FW: 387.5
Purity: ≥98% (may contain up to 10% of the (E) isomer)
UV/Vis.: λ_{max}: 241, 288 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

4'-hydroxy Tamoxifen is supplied as a crystalline solid. A stock solution may be made by dissolving the 4'-hydroxy tamoxifen in the solvent of choice. 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 4'-hydroxy tamoxifen in ethanol and DMF is approximately 20 mg/ml and approximately 2 mg/ml in DMSO. 4'-hydroxy Tamoxifen is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4'-hydroxy tamoxifen should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 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

4'-hydroxy Tamoxifen is one of five main phase I metabolites of tamoxifen (Item No. 13258), a well-known estrogen receptor antagonist in breast but partial estrogen receptor agonist in endometrium. 4'-hydroxy Tamoxifen is a product of cytochrome P450 (CYP)2D6 and CYP2B6 activity.\textsuperscript{1-3} With the addition of a hydroxyl group, 4'-hydroxy tamoxifen has been shown to have a higher affinity for estrogen receptors compared to tamoxifen.\textsuperscript{4} At 10-100 µM, 4'-hydroxy tamoxifen is cytotoxic, in a non-apoptotic manner, to HEC-1B and HEC-1A human endometrial adenocarcinoma cell lines.\textsuperscript{5}

References