Tamoxifen
Item No. 13258

CAS Registry No.: 10540-29-1
Formal Name: 2-[4-[(1Z,1,2,6-diphenyl-1-buten-1-yl)phenoxy]-N,N-dimethyl-ethanamine
MF: C26H29NO
FW: 371.5
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_{max} 238, 278 nm

Laboratory Procedures
For long term storage, we suggest that tamoxifen be stored as supplied at -20°C. It should be stable for at least two years. Tamoxifen is supplied as a crystalline solid. A stock solution may be made by dissolving the tamoxifen in the solvent of choice. 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 tamoxifen in ethanol and DMF is approximately 20 mg/ml and approximately 2 mg/ml in DMSO.

Tamoxifen is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, taxomifen should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 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.

There are two homologous nuclear receptors for the hormone estradiol (estrogen), commonly called ERα and ERβ. Receptor activation leads to the formation of homo and heterodimers, which in turn interact with accessory proteins to regulate gene transcription. Tamoxifen is a selective estrogen receptor modulator, evoking tissue-dependent effects. It is an antagonist of ER action in breast tissue and breast cancer cells and is reported to be effective in the treatment of early breast cancer to prevent tumor growth.1,2 Importantly, tamoxifen has been reported to act as an ER agonist in bone and blood vessels, helping to minimize osteoporosis and reduce the risk of cardiovascular disease in post-menopausal women.3 Also, tamoxifen is a partial ER agonist in uterine tissues and is reported to increase the risk of endometrial carcinoma.4

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/13258

WARNING: This product is for laboratory research only; not for administration to humans, not for human or veterinary diagnostic or therapeutic use.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

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