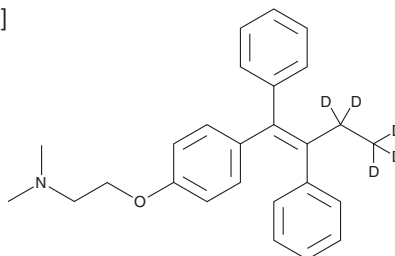


PRODUCT INFORMATION



Tamoxifen-d₅ Item No. 18262

CAS Registry No.: 157698-32-3
Formal Name: 2-[4-[(1Z)-1,2-diphenyl-1-buten-1-yl-3,3,4,4,4-d₅]phenoxy]-N,N-dimethyl-ethanamine
MF: C₂₆H₂₄D₅NO
FW: 376.6
Chemical Purity: ≥98% (Tamoxifen)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A 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

Tamoxifen-d₅ is intended for use as an internal standard for the quantification of tamoxifen (Item No. 13258) 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).

Tamoxifen-d₅ is supplied as a solid. A stock solution may be made by dissolving the tamoxifen-d₅ in the solvent of choice, which should be purged with an inert gas. Tamoxifen-d₅ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of tamoxifen-d₅ in ethanol and DMF is approximately 20 mg/ml and approximately 2 mg/ml in DMSO.

Description

Tamoxifen-d₅ is intended for use as an internal standard for the quantification of tamoxifen (Item No. 13258) by GC- or LC-MS. Tamoxifen is an estrogen receptor antagonist (IC₅₀ = 45 nM for the rabbit receptor).¹ It reduces the proliferation of MCF-7 breast cancer cells when used at a concentration of 10 μM.² Tamoxifen is active against *S. cerevisiae*, *C. neoformans*, and five *Candida* species (MICs = 12, 64, and 8-64 μg/ml, respectively).³ It decreases tumor proliferation, weight, and volume in an MCF-7 mouse xenograft model when administered at a dose of 100 μg/animal per day.⁴ Tamoxifen (0.8 mg/kg every two weeks) also reduces proteinuria and increases survival in an NZBWF1 mouse model of systemic lupus erythematosus (SLE).⁵ It can be used as a regulator for Cre-recombinase inducible gene expression *in vivo*.⁶ Formulations containing tamoxifen have been used in the treatment of estrogen receptor-positive breast cancer.

References

1. Löser, R., Seibel, K., Roos, W., et al. *Eur. J. Cancer Clin. Oncol.* **21**(8), 985-990 (1985).
2. Lippman, M., Bolan, G., and Huff, K. *Cancer Res.* **36**(12), 4595-4601 (1976).
3. Dolan, K., Montgomery, S., Buchheit, B., et al. *Antimicrob. Agents Chemother.* **53**(8), 3337-3346 (2009).
4. Long, B.J., Jelovac, D., Handratta, V., et al. *J. Natl. Cancer Inst.* **96**(6), 456-465 (2004).
5. Wu, W.-M., Lin, B.-F., Su, Y.-C., et al. *Scand. J. Immunol.* **52**(4), 393-400 (2000).
6. Chen, M., Lichtler, A.C., Sheu, T.-J., et al. *Genesis* **45**(1), 44-50 (2007).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 06/20/2023

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM