



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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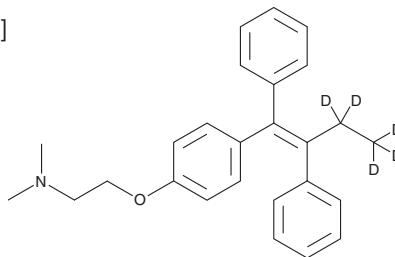


# PRODUCT INFORMATION



## Tamoxifen-d<sub>5</sub> 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-d<sub>5</sub>]phenoxy]-N,N-dimethyl-ethanamine  
**MF:** C<sub>26</sub>H<sub>24</sub>D<sub>5</sub>NO  
**FW:** 376.6  
**Chemical Purity:** ≥99% (Tamoxifen)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

Tamoxifen-d<sub>5</sub> contains five deuterium atoms at the 3, 3, 4, 4, and 4 positions. Tamoxifen-d<sub>5</sub> 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-d<sub>5</sub> is supplied as a solid. A stock solution may be made by dissolving the tamoxifen-d<sub>5</sub> in the solvent of choice, which should be purged with an inert gas. Tamoxifen-d<sub>5</sub> is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of tamoxifen-d<sub>5</sub> in ethanol and DMF is approximately 20 mg/ml and approximately 2 mg/ml in DMSO.

### Description

Tamoxifen is a selective estrogen receptor (ER) 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.<sup>1,2</sup> 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.<sup>3</sup> Also, tamoxifen is a partial ER agonist in uterine tissues and is reported to increase the risk of endometrial carcinoma.<sup>4</sup>

### References

1. Horwitz, K.B. and McGuire, W.L. Nuclear mechanisms of estrogen action. Effects of estradiol and anti-estrogens on estrogen receptors and nuclear receptor processing. *J. Biol. Chem.* **253**(22), 8185-8191 (1978).
2. Clarke, M., Collins, R., Davies, C., *et al.* Tamoxifen for early breast cancer: An overview of the randomised trials. *Lancet* **351**(9114), 1451-1467 (1998).
3. Tonetti, D.A. and Jordan, V.C. Targeted anti-estrogens to treat and prevent diseases in women. *Mol. Med. Today* **2**(5), 218-223 (1996).
4. Jordan, V.C. and Assikis, V.J. Endometrial carcinoma and tamoxifen: Clearing up a controversy. *Clin. Cancer Res.* **1**(5), 467-472 (1995).

#### 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.

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