

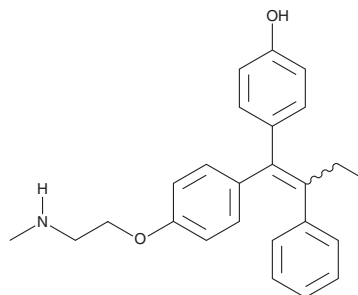
# PRODUCT INFORMATION



## (E/Z)-Endoxifen

Item No. 21502

**CAS Registry No.:** 110025-28-0  
**Formal Name:** 4-[1-[4-[2-(methylamino)ethoxy]phenyl]-2-phenyl-1-buten-1-yl]-phenol  
**Synonym:** (E/Z)-N-desmethyl-4-hydroxy Tamoxifen  
**MF:** C<sub>25</sub>H<sub>27</sub>NO<sub>2</sub>  
**FW:** 373.5  
**Purity:** ≥98% (mixture of isomers)  
**UV/Vis.:** λ<sub>max</sub>: 244, 286 nm  
**Supplied as:** A crystalline 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

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

(E/Z)-Endoxifen is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (E/Z)-endoxifen should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. (E/Z)-endoxifen 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

(E/Z)-Endoxifen is an active metabolite of tamoxifen (Item No. 13258) produced by the sequential action of cytochrome P450 (CYP) isoforms, including CYP2D6.<sup>1-3</sup> It is a strong anti-estrogen, as it has an approximately 100-fold greater affinity for estrogen receptors than tamoxifen.<sup>1</sup> As the efficient conversion of tamoxifen to endoxifen depends on CYP2D6, polymorphisms in this CYP isoform can impact the effectiveness of +tamoxifen treatment.<sup>1-3</sup>

### References

1. Brauch, H., Mürdter, T.E., Eichelbaum, M., *et al.* Pharmacogenomics of tamoxifen therapy. *Clin. Chem.* **55(10)**, 1770-1782 (2009).
2. Mugundu, G.M., Sallans, L., Guo, Y., *et al.* Assessment of the impact of CYP3A polymorphisms on the formation of  $\alpha$ -hydroxytamoxifen and N-desmethyltamoxifen in human liver microsomes. *Drug Metab. Dispos.* **40(2)**, 389-396 (2012).
3. Markopoulos, C., Kykalos, S., and Mantas, D. Impact of CYP2D\*6 in the adjuvant treatment of breast cancer patients with tamoxifen. *World J. Clin. Oncol.* **5(3)**, 374-381 (2014).

#### 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, 10/31/2022

#### 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