

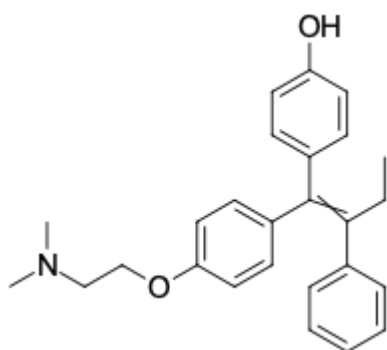
## (E/Z)-4-Hydroxytamoxifen

<http://www.lumiprobe.com/p/4-hydroxy-tamoxifen>

(E/Z)-4-Hydroxytamoxifen (4-OHT, cis/trans-4-hydroxytamoxifen, afimoxifene) is a selective estrogen receptor (ER) modulator, an active metabolite of tamoxifen. 4-Hydroxytamoxifen is widely used as a research tool for inducible genome manipulation.

4-Hydroxytamoxifen is used in the inducible Cre-LoxP system to control CreER/CreERT2 recombinase activity and trigger tissue-specific gene expression or genome/genetic modification (e.g., gene deletion). 4-Hydroxytamoxifen is a part of the TRAP/TRAP2 (targeted recombination in active populations) systems providing genetic access to neuron activity. It is also used in CRISPR/Cas9 gene editing to activate inactivated Cas9 nuclease.

Also, 4-Hydroxytamoxifen was reported to be an intramembranous lipid peroxidation inhibitor, exhibiting peroxy radical scavenging activity.



**Structure of (E/Z)-4-Hydroxytamoxifen**

### General properties

|                     |                                                                                                                                                                                                                                                                                                                                 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Appearance:         | white solid                                                                                                                                                                                                                                                                                                                     |
| Molecular weight:   | 387.52                                                                                                                                                                                                                                                                                                                          |
| CAS number:         | 68392-35-8                                                                                                                                                                                                                                                                                                                      |
| Molecular formula:  | C <sub>26</sub> H <sub>29</sub> NO <sub>2</sub>                                                                                                                                                                                                                                                                                 |
| IUPAC name:         | 4-(1-[4-(Dimethylaminoethoxy)phenyl]-2-phenyl-1-butenyl)phenol                                                                                                                                                                                                                                                                  |
| Solubility:         | DMF, Ethanol, DMSO                                                                                                                                                                                                                                                                                                              |
| Quality control:    | NMR <sup>1</sup> H and HPLC-MS (95+%)                                                                                                                                                                                                                                                                                           |
| Storage conditions: | 24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.                                                                                                                                                                                                                 |
| Legal statement:    | Product is offered and sold for research purposes only. Product is not tested for safety and efficacy in food, drug, medical device, cosmetic, no express or implied authorization to use for any other purpose, including, without limitation, in vitro diagnostic purposes, for humans or animals or for commercial purposes. |