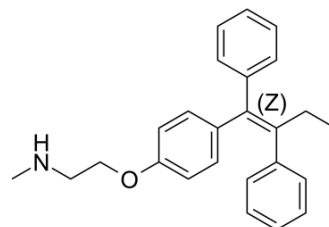


N-Desmethyltamoxifen

Cat. No.:	HY-129099
CAS No.:	31750-48-8
Molecular Formula:	C ₂₅ H ₂₇ NO
Molecular Weight:	357.49
Target:	PKC; Estrogen Receptor/ERR; Drug Metabolite
Pathway:	Epigenetics; TGF-beta/Smad; Others; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	N-Desmethyltamoxifen is the major metabolite of tamoxifen in humans. N-Desmethyltamoxifen, a poor antiestrogen, is a ten-fold more potent protein kinase C (PKC) inhibitor than Tamoxifen. N-Desmethyltamoxifen is also a potent regulator of ceramide metabolism in human AML cells, limiting ceramide glycosylation, hydrolysis, and sphingosine phosphorylation ^[1] [2][3].									
IC₅₀ & Target	PKC	Estrogen Receptor								
In Vitro	<p>N-desmethyltamoxifen (20-500 ng/ml; 48 hours) has a profound inhibitory effect upon all seven glioma lines (T98G, U87, U138, U373, ALW, AUK, CAS cells)^[1].</p> <p>N-desmethyltamoxifen (1.5-10 μM; 114 hours) inhibits growth of MCF 7 human mammary carcinoma cells^[2].</p> <p>N-desmethyltamoxifen, resulting from the CYP3A4/5-mediated catalysis of tamoxifen, is the major primary quantitative metabolite of tamoxifen^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[2]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>MCF 7 human mammary carcinoma cells</td> </tr> <tr> <td>Concentration:</td> <td>1.5, 2.5, 5, 7.5, 10 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>114 hours</td> </tr> <tr> <td>Result:</td> <td>Inhibits growth of MCF 7 human mammary carcinoma cells</td> </tr> </table>		Cell Line:	MCF 7 human mammary carcinoma cells	Concentration:	1.5, 2.5, 5, 7.5, 10 μM	Incubation Time:	114 hours	Result:	Inhibits growth of MCF 7 human mammary carcinoma cells
Cell Line:	MCF 7 human mammary carcinoma cells									
Concentration:	1.5, 2.5, 5, 7.5, 10 μM									
Incubation Time:	114 hours									
Result:	Inhibits growth of MCF 7 human mammary carcinoma cells									

REFERENCES

- [1]. Vertosick FT Jr, et al. A comparison of the relative chemosensitivity of human gliomas to tamoxifen and n-desmethyltamoxifen in vitro. J Neurooncol. 1994;19(2):97-103.
- [2]. Morad SA, et al. Modification of sphingolipid metabolism by tamoxifen and N-desmethyltamoxifen in acute myelogenous leukemia--Impact on enzyme activity and response to cytotoxics. Biochim Biophys Acta. 2015 Jul;1851(7):919-28.
- [3]. Reddel RR, et al. N-desmethyltamoxifen inhibits growth of MCF 7 human mammary carcinoma cells in vitro. Eur J Cancer Clin Oncol. 1983 Aug;19(8):1179-81.
- [4]. Seong Hwan Kim, et al. Use of Antidepressants in Patients with Breast Cancer Taking Tamoxifen. J Breast Cancer. 2010 Dec;13(4):325-336.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA