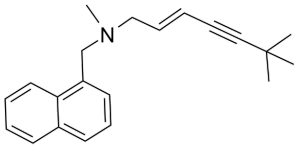
Terbinafine (Synonyms: TDT 067)

Cat. No.: HY-17395A Purity: 99.91% Data Sheet SDS Handling Instructions

Terbinafine (TDT 067) is an orally active and potent **antifungal** agent. Terbinafine is a potent non-competitive inhibitor of **squalene epoxidase** from *Candida*, with a K_i of 30 nM. Terbinafine also shows antibacterial activity against certain Gram-positive and Gram-negative **bacteria**.

For research use only. We do not sell to patients.



Terbinafine Chemical Structure
CAS No. : 91161-71-6

Size	Price	Stock	Quantity
Free Sample (0.5-1 mg)		Apply Now	
Solution			
10 mM * 1 mL in DMSO	USD 73	In-stock	0
Solid + Solvent			
10 mM * 1 mL ready for reconstitution	USD 73	In-stock	0
Solid			
100 mg	USD 66	In-stock	0
200 mg	USD 117	In-stock	0
500 mg		Get quote	
1 g		Get quote	

Get it October 14 by noon. Order within 12 hrs 24 mins.

Add to Cart Get Quotation Now or Bulk Inquiry

Customer Review
Based on 2 publication(s) in Google Scholar

Other Forms of Terbinafine:

Terbinafine hydrochloride	In-stock
Terbinafine lactate	Get quote
Terbinafine-d3 hydrochloride	Get quote

2 Publications Citing Use of MCE Terbinafine

- **Cell Death Dis**. 2021 May 13;12(5):482.
- **Cancer Commun (Lond)**. 2021 Jul 16.

Cancer Communications | 2021 Jul 16 | PubMed ID: 34268906 | Read Article

Squalene epoxidase promotes colorectal cancer cell proliferation through accumulating calcitriol and activating CYP24A1-mediated MAPK signaling, et al. Squalene epoxidase promotes colorectal cancer cell proliferation through accumulating calcitriol and activating CYP24A1-mediated MAPK signaling
Luwei He, Huaguang Li, ..., Moubin Lin

Article Snippet
"... mice were sacrificed by cervical dislocation before the volume of tumors reached 1000 mm3.. For **terbinafine** (CatHY17395A; **MedChemExpress**, Shanghai, China) treatment, HT29 and RKO cells (4×106 cells in 0.1 mL PBS) were subcutaneously injected into the left flank of nude mice.. Once tumor volumes reached 30 mm3, these mice were divided into control group (PBS ..." *(More...)*

Figure Legend
"**Terbinafine** suppressed the growth of CRC organoids and xenograft ..." *(More...)*

Cancer Science | 2022 Jan 06 | PubMed ID: 34939274 | Read Article

Squalene synthase predicts poor prognosis in stage I-III colon adenocarcinoma and synergizes squalene epoxidase to promote tumor progression, et al. Squalene synthase predicts poor prognosis in stage I-III colon adenocarcinoma and synergizes squalene epoxidase to promote tumor progression
Huihong Jiang, Erjiang Tang, ..., Luwei He

Article Snippet
"2.1 Reagents D-pantethine (abs816989) was purchased from absin.. Lapaquistat (HY-14925) and **terbinafine** (HY-17395A) were purchased from **MCE**.. N -acetyl-l-cysteine (S0077) was purchased from Beyotime." *(More...)*

Figure Legend
"... HT29 cells were treated with lapaquistat (La) and **terbinafine** (Te) at different concentrations for 48 or 72 ..." *(More...)*

Cell Death & Disease | 2021 May 13 | PubMed ID: 33986254 | Read Article

Targeting epigenetic modulation of cholesterol synthesis as a therapeutic strategy for head and neck squamous cell carcinoma
Xing Xu, Jun Chen, ..., Xu Wang

Article Snippet
"Chemical compoundsThe following compounds were purchased from commercial vendors: GSK126 (S7061, Selleck, China), GSK343 (S7164, Selleck, China), EPZ6438 (S7168, Selleck, China), NB-598 (HY-16343C, MCE, China), Atorvastatin (HY-17379, MCE, China), Ro48-8071 (HY-18630A, MCE, China), **Terbinafine** (HY-17395, **MCE**, China), Butenafine (HY-17396, MCE, China), Cholesterol (C3045, Sigma, China), Desmosterol (H130206, Aladdin, China), Lathosterol (HY-17395, MCE, China), Squalene (S3626, Sigma, China)." *(More...)*

Figure Legend
"... treatment groups. Cells were treated with vehicle, EPZ6438, **terbinafine** or the combination for 48 h. Bar = ..." *(More...)*

Biological Activity | Protocol | Purity & Documentation | References | Customer Review

Description

Terbinafine (TDT 067) is an orally active and potent **antifungal** agent. Terbinafine is a potent non-competitive inhibitor of **squalene epoxidase** from *Candida*, with a K_i of 30 nM. Terbinafine also shows antibacterial activity against certain Gram-positive and Gram-negative **bacteria**[1] [2] [3].

IC_{50} & Target

Ki: 30 nM (squalene epoxidase)[1]

In Vitro

Terbinafine has a primary fungicidal action *in vitro* against most fungal pathogens, including dermatophytes, and dimorphic and filamentous fungi. Terbinafine specifically inhibits fungal ergosterol biosynthesis at the point of squalene epoxidation. The treated fungal cells rapidly accumulate tlic intermediate squalene and become deficient in the end-product of the pathway, ergosterol[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Terbinafine is not only active after topical application but is very effective in experimental dermatophytoses following oral administration. In fungi infected guinea-pigs, the skin temperature dropps dramatically after the fourth treatment of terbinafine[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Clinical Trial

NCT Number	Sponsor	Condition	Start Date	Phase
NCT01433107	Novartis	Tinea Pedis	August 2011	Phase 3
NCT03171584	Assiut University	Antifungal Drugs in Onychomycosis	July 1, 2017	Phase 3
NCT00443898	Novartis Pharmaceuticals|Novartis	Onychomycosis	December 2006	Phase 3

View More

Molecular Weight

291.43

Formula

$C_{21}H_{25}N$

CAS No.

91161-71-6

SMILES

CN(C/C=C/C#CC(C)(C)C)CC1=C2C=CC=CC2=CC=C1

Shipping

Room temperature in continental US; may vary elsewhere.

Storage

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month

Solvent & Solubility

In Vitro:

DMSO : ≥ 100 mg/mL (343.14 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Mass Concentration	1 mg	5 mg	10 mg
	1 mM	3.4314 mL	17.1568 mL	34.3136 mL
	5 mM	0.6863 mL	3.4314 mL	6.8627 mL
	10 mM	0.3431 mL	1.7157 mL	3.4314 mL

* Please refer to the solubility information to select the appropriate solvent.

In Vivo:

3. Add each solvent one by one: **10% DMSO » 90% (20% SBE-β-CD in saline)**
   Solubility: 2.5 mg/mL (8.58 mM); Suspended solution; Need ultrasonic
4. Add each solvent one by one: **10% DMSO » 90% corn oil**
   Solubility: 2.5 mg/mL (8.58 mM); Clear solution; Need ultrasonic

* All of the co-solvents are available by MCE.

Purity & Documentation

Purity: 99.91%

Select Batch: HY-17395A-11682

Data Sheet (276 KB) SDS (393 KB) COA (248 KB)

LCMS (267 KB) Handling Instructions (2659 KB)

References

[1]. Ryder NS, et al. Terbinafine: mode of action and properties of the squalene epoxidase inhibition. Br J Dermatol. 1992 Feb;126 Suppl 39:2-7.

[2]. Mieth H, et al. Preclinical evaluation of terbinafine in vivo. Clin Exp Dermatol. 1989 Mar;14(2):104-7.

[3]. Ciftci E, et al. Mupirocin vs terbinafine in impetigo.Indian J Pediatr. 2002 Aug;69(8):679-82.

Molarity Calculator | Dilution Calculator

The molarity calculator equation

Mass (g) = Concentration (mol/L) × Volume (L) × Molecular Weight (g/mol)

Mass		Concentration		Volume		Molecular Weight *
	mg		mM		mL	291.43

Calculate

Reset

Keywords: Terbinafine 91161-71-6 TDT 067 TDT067 TDT-067 Fungal Bacterial Antibiotic infections bacteria Candida squalene epoxidase antibacterial activity Inhibitor inhibitor inhibit

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