Product Data Sheet

Product Name: Terbinafine HCl
Cat. No.: GC14576

Chemical Properties

Cas. No.	78628-80-5		
Chemical Name	(E)-N,6,6-trimethyl-N-(naphthalen-1-ylmethyl)hept-2-en-4-yn-1-amine;hydrochloride		
SMILES	CC(C)(C)C#CC=CCN(C)CC1=CC=CC2=CC=CC=C21.Cl		
Formula	C21H26ClN	M.Wt	327.89
Solubility	≥ 16.3mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Caution: Product has not been fully validated for medical applications. For research use only.
Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com
Address: 10292 Central Ave. #205, Montclair, CA, USA

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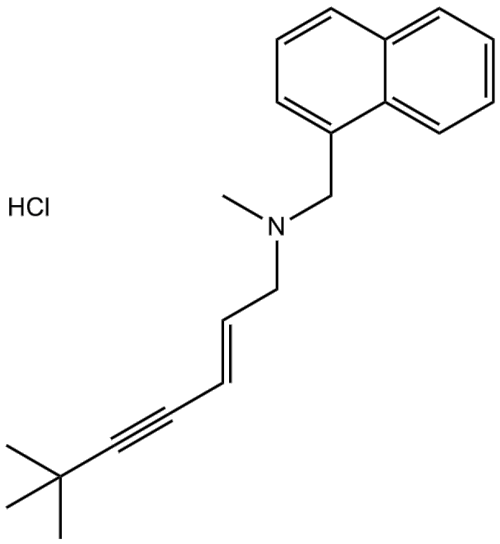
Structure



Protocol

Animal experiment: Guinea-pigs: The backs (lumbar regions) of guinea-pigs, which have been mechanically depilated, are infected with 0.1 mL Sabouraud's dextrose 2% broth containing 106 c.f.u. of Truhophyton mentagrophytes. The treatments commence 48 h post-inoculation. The test compounds (Terbinafine) are suspended in 2% tylose and Tween 80 and administered via a stomach tube once daily on 9 consecutive days, or dissolved in a mixture of polyethylene glycol 400 and etbanol and spread on the infected part ot the body in a volume of 0.4 mL with a Hrigalski spatula once daily for 1-7 consecutive days[2].

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References:

[1]. Ryder NS, et al. Terbinafine: mode of action and properties of the squalene epoxidase inhibition. Br J Dermatol. 1992 Feb;126 Suppl 39:2-8.
[2]. Mieth H, et al. Preclinical evaluation of terbinafine in vivo. Clin Exp Dermatol. 1989 Mar;14(2):104-8.

Background

Terbinafine hydrochloride (TDT 067 hydrochloride) is an antifungal medication used to treat fungal infections. It is a potent non-competitive inhibitor of squalene epoxidase from Candida with a Ki of 30 nM.

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].

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].

References:
[1]. Ryder NS, et al. Terbinafine: mode of action and properties of the squalene epoxidase inhibition. Br J Dermatol. 1992 Feb;126 Suppl 39:2-8.
[2]. Mieth H, et al. Preclinical evaluation of terbinafine in vivo. Clin Exp Dermatol. 1989 Mar;14(2):104-8.