Terbinafine-d_3 hydrochloride

Cat. No.: HY-17395S

CAS No.: 1310012-15-7

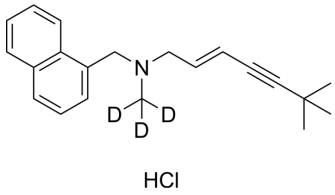
Molecular Formula: $C_{21}H_{23}D_3ClN$

Molecular Weight: 330.91

Target: Fungal; Bacterial; Antibiotic; Isotope-Labeled Compounds

Pathway: Anti-infection; Others

Storage: -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 30 mg/mL (90.66 mM; Need ultrasonic and warming)
DMSO : 10 mg/mL (30.22 mM; Need ultrasonic and warming)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.0220 mL	15.1098 mL	30.2197 mL
5 mM	0.6044 mL	3.0220 mL	6.0439 mL
10 mM	0.3022 mL	1.5110 mL	3.0220 mL

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

BIOLOGICAL ACTIVITY

Description

Terbinafine-d_3 (hydrochloride) is the deuterium labeled Terbinafine hydrochloride. 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[1][2]. Terbinafine hydrochloride also antibacterial activity against certain Gram-positive and Gram-negative bacteria[3].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019;53(2):211-216.

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

[3]. Mieth H, et al. Preclinical evaluation of terbinafine in vivo. Clin Exp Dermatol. 1989 Mar;14(2):104-8.

[4]. 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.

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