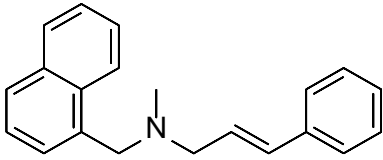


# Product data sheet



MedKoo Cat#: 318299 Name: Naftifine HCl CAS: 65473-14-5 (HCl) Chemical Formula: C <sub>21</sub> H <sub>22</sub> ClN Molecular Weight: 323.864	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

## 1. Product description:

Naftifine is an allylamine antifungal drug for the topical treatment of tinea pedis, tinea cruris, and tinea corporis (fungal infections). Its precise mechanism of action is unknown, but may involve selectively blocking sterol biosynthesis via inhibition of the squalene 2,3-epoxidase enzyme. The half-life is approximately 2–3 days. The metabolites are excreted in the urine and feces.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	10.0	30.88
DMF:PBS (pH 7.2) (1:5)	0.16	0.49
DMSO	52.5	162.11
Ethanol	12.67	39.11

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.09 mL	15.44 mL	30.88 mL
5 mM	0.62 mL	3.09 mL	6.18 mL
10 mM	0.31 mL	1.54 mL	3.09 mL
50 mM	0.06 mL	0.31 mL	0.62 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

- Ryder NS, Seidl G, Troke PF. Effect of the antimycotic drug naftifine on growth of and sterol biosynthesis in *Candida albicans*. *Antimicrob Agents Chemother*. 1984 Apr;25(4):483-7. doi: 10.1128/AAC.25.4.483. PMID: 6375557; PMCID: PMC185557.
- Georgopoulos A, Petranyi G, Mieth H, Drews J. In vitro activity of naftifine, a new antifungal agent. *Antimicrob Agents Chemother*. 1981 Mar;19(3):386-9. doi: 10.1128/AAC.19.3.386. PMID: 7247366; PMCID: PMC181441.

### In vivo study

- Petranyi G, Georgopoulos A, Mieth H. In vivo antimycotic activity of naftifine. *Antimicrob Agents Chemother*. 1981 Mar;19(3):390-2. doi: 10.1128/AAC.19.3.390. PMID: 7247367; PMCID: PMC181442.

## 7. Bioactivity

Biological target:

Naftifine hydrochloride is an antibiotic.

# Product data sheet



## In vitro activity

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Naftifine exhibits an interesting in vitro spectrum of activity against dermatophytes (38 strains; minimal inhibitory concentration [MIC] range 0.1 to 0.2 microgram/ml), aspergilli (6 strains; MIC range, 0.8 to 12.5 microgram/ml), *Sporothrix schenckii* (2 strains; MICs, 0.8 and 1.5 microgram/ml), and yeasts of the genus *Candida* (77 strains; MIC range, 1.5 to greater than 100 microgram/ml). Its degree of efficacy is unaffected by the organism density in the test medium, and it is primarily fungicidal against dermatophytes as well as yeasts. Its in vitro efficacy is pH dependent and rises with increasing pH values.

Reference: Antimicrob Agents Chemother. 1981 Mar;19(3):386-9. <https://pubmed.ncbi.nlm.nih.gov/7247366/>

## In vivo activity

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Naftifine, a new antifungal agent belonging chemically to the allylamines, was tested for its in vivo activity after topical application against guinea pig skin infections caused by *Trichophyton mentagrophytes*, *T. mentagrophytes* var. *quinckeanum*, or *Microsporum racemosum*. Compared with standard compounds, naftifine proved to be highly effective mycologically and clinically after topical application in the above models.

Reference: Antimicrob Agents Chemother. 1981 Mar;19(3):390-2. <https://pubmed.ncbi.nlm.nih.gov/7247367/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*