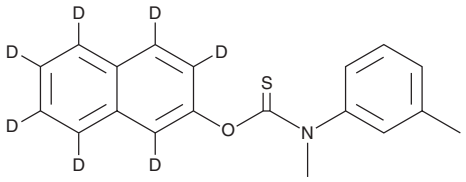
PRODUCT INFORMATION

Tolnaftate-d_7

Item No. 29048

CAS Registry No.: 1329835-64-4
Formal Name: N-methyl-N-(3-methylphenyl)-carbamothioic acid, O-(2-naphthalen-d_7-yl) ester
MF: $C_{19}H_{10}D_7NOS$
FW: 314.5
Chemical Purity: ≥98% (Tolnaftate)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_7); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Tolnaftate-d_7 is intended for use as an internal standard for the quantification of tolnaftate (Item No. 21446) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Tolnaftate-d_7 is supplied as a solid. A stock solution may be made by dissolving the tolnaftate-d_7 in the solvent of choice, which should be purged with an inert gas. Tolnaftate-d_7 is soluble in organic solvents such as methanol, DMSO, and acetonitrile.

Description

Tolnaftate is a thiocarbamate antifungal agent.[1] It is active against clinical isolates of the dermatophytes *T. rubrum*, *T. mentagraphytes*, *T. verrucosum*, *E. floccosum*, and *M. canis* (MIC_{50}s = 50, 100, 6, 50, and 50 ng/ml, respectively), as well as 18 additional yeast and filamentous fungi species (MIC = 0.003-0.8 µg/ml).[2,3] Tolnaftate also reduces aflatoxin production in *A. parasiticus* in a concentration-dependent manner.[4] It inhibits squalene epoxidase with an IC_{50} value of 12.5 µg/ml in a cell-free assay.[1]

References

1. Ryder, N.S., Frank, I., and Dupont, M.C. Ergosterol biosynthesis inhibition by the thiocarbamate antifungal agents tolnaftate and tolciclate. *Antimicrob. Agents Chemother.* **29(5)**, 858-860 (1986).
2. Petranyi, G., Meingassner, J.G., and Mieth, H. Antifungal activity of the allylamine derivative terbinafine in vitro. *Antimicrob. Agents Chemother.* **31(9)**, 1365-1368 (1987).
3. Waitz, J.A., Moss, E.L., and Weinstein, M.J. Chemotherapeutic evaluation of clotrimazole [Bay b 5097, 1 (o-chloro-α-α-diphenylbenzyl) imidazole]. *Appl. Microbiol.* **22(5)**, 891-898 (1971).
4. Khan, S.N., Maggon, K.K., and Venkitasubramanian, T.A. Inhibition of aflatoxin biosynthesis by tolnaftate. *Appl. Environ. Microbiol.* **36(2)**, 270-273 (1978).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM