

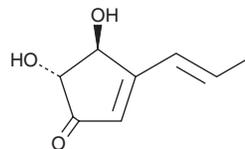
PRODUCT INFORMATION



Terrein

Item No. 23496

CAS Registry No.: 582-46-7
Formal Name: 4S,5R-dihydroxy-3-(1E)-1-propen-1-yl-2-cyclopenten-1-one
Synonym: NSC 291308
MF: C₈H₁₀O₃
FW: 154.2
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Special Conditions: Protect from light



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

Laboratory Procedures

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

Description

Terrein is a fungal metabolite produced by *A. terreus* with diverse biological activities.¹ It reduces melanin production in Mel-Ab mouse melanocytes in a dose-dependent manner *via* ERK activation and downregulation of microphthalmia-associated transcription factor (MITF).² Terrein inhibits proliferation of human keratinocytes and thins the epidermis in a skin equivalent model of psoriasis vulgaris.³ It is antimicrobial, inhibiting the growth of *S. aureus*, *A. hydrophila*, *E. faecalis*, *A. flavus*, *A. alternata*, *B. sorokiniana*, and *P. drechsleri* (MICs = 1-40 µg/ml).⁴ Terrein also inhibits growth of A549 lung cancer cells in a dose-dependent manner.

References

1. Raistrick, H. and Smith, G. Studies in the biochemistry of micro-organisms. The metabolic products of *Aspergillus terreus* Thom. A new mould metabolic product—terrein. *Biochem J.* **29(3)**, 606-611 (1935).
2. Park, S.H., Kim, D.S., Kim, W.G., *et al.* Terrein: A new melanogenesis inhibitor and its mechanism. *Cell Mol. Life Sci.* **61(22)**, 2878-2885 (2004).
3. Kim, D.S., Cho, H.J., Lee, H.K., *et al.* Terrein, a fungal metabolite, inhibits the epidermal proliferation of skin equivalents. *J. Dermatol. Sci.* **46(1)**, 65-68 (2007).
4. Goutam, J., Sharma, G., Tiwari, V.K., *et al.* Isolation and characterization of "terrein" an antimicrobial and antitumor compound from endophytic fungus *Aspergillus terreus* (JAS-2) associated from *Achyranthus aspera* Varanasi, India. *Front. Microbiol.* **8**, 1334 (2017).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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