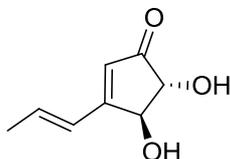


## Terrein

Code No.: **BIA-T1408**

Pack sizes: **1 mg, 5 mg**



Synonyms : (+) Terrein, NSC 291308

### Specifications

CAS #	: 582-46-7
Molecular Formula	: C <sub>8</sub> H <sub>10</sub> O <sub>3</sub>
Molecular Weight	: 154.2
Source	: <i>Aspergillus</i> sp.
Appearance	: Light tan solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO. Limited water solubility.

### Application Notes

Terrein is a polar, substituted dihydrocyclopentenone first reported by Raistrick and colleagues in the 1930s and subsequently found in a number of *Aspergillus* and *Penicillium* species. For many years the biological profile and mode of action of terrein was unstudied; however, recent research showed that terrein reduces melanin synthesis by reducing tyrosinase production via ERK activation, followed by MITF down-regulation. Terrein also reduces human keratinocyte proliferation by inhibiting ERK and by decreasing the expression of cyclin B1 and Cdc2 complex.

### References

1. Studies in the biochemistry of micro-organisms: The metabolic products of *Aspergillus terreus* Thom. A new mould metabolic product, terrein. Raistrick H. & Smith G. *Biochem. J.* 1935, 29, 606.
2. Terrein: a new melanogenesis inhibitor and its mechanism. Park S.H. et al. *Cell. Mol. Life Sci.* 2004, 61, 2878.
3. Terrein inhibits keratinocyte proliferation via ERK inactivation and G2/M cell cycle arrest. Kim D.S. et al. *Exp. Dermatol.* 2008, 17, 312.

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