Ambruticin

Cat. No.: HY-121050

CAS No.: 58857-02-6

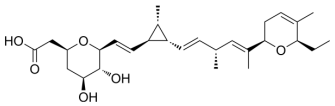
Molecular Formula: $C_{28}H_{42}O_6$

Molecular Weight: 474.63

Target: Antibiotic; Fungal

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Ambruticin (W7783) is an orally active and potent antifungal antibiotic. Ambruticin represents a class of antibiotics, that can be isolated from a strain of Polyangium cellulosum var. fulvum, a bacterium belonging to the class Myxobacteriales. Ambruticin is a cyclopropyl-polyene-pyran acid and is active against fungi[1].

In Vitro

Ambruticin is highly active against the yeast and filamentous phases of H. capsulatum and B. dermatitidis; the MIC range was 0.049 to 0.39 μg/mL, and the order of activity appeared similar to amphotericin B (HY-B0221)[2].
Ambruticin MIC is 1.56 μg/mL and the Griseofulvin (HY-17583) MIC was 3.12 μg/mL against M.fulvum[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

The acute LD_{50} values for the sodium salt of Ambruticin in mice were: intravenous 315 mg/kg, oral > 1000 mg/kg[1].
Ambruticin is rapidly absorbed by the oral route in mice. Ambruticin (75 mg/kg, gavage) produces a peak serum level of 46 μg/mL with a serum half-life of 3.1 h[2].
Ambruticin (40 mg/kg, oral, twice daily for a total of 10 days) shows protective activity in Guinea pigs infected with a severe T. mentagrophytes challenge[2].
Ambruticin shows protective activity in mice acutely infected with a severe C. albicans challenge[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Guinea pigs (infected with a strain of T. mentagrophytes)[2]
Dosage:	40 mg/kg
Administration:	Oral, starting on day 3 postinfection, twice daily for a total of 10 days
Result:	On postinfection day 15, the guinea pig mean lesion score was approximately 1.3; by postinfection day 27, all the lesions were essentially healed.

REFERENCES

[1]. Ringel SM, et al. Ambruticin (W7783), a new antifungal antibiotic. J Antibiot (Tokyo). 1977 May;30(5):371-5.

[2]. Ringel SM. In vitro and in vivo studies of ambruticin (W7783): new class of antifungal antibiotics. Antimicrob Agents Chemother. 1978 May;13(5):762-9.

Caution: Product has not been fully validated for medical applications. For research use only.

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