Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Bicyclomycin benzoate

Catalog No: tcsc6253

Available Sizes

Size: 5mg

Size: 10mg

Size: 25mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
37134-40-0

Formula:
$C_{19}H_{22}N_2O_8$

Pathway:
Anti-infection

Target:
Bacterial

Purity / Grade:
>98%

Solubility:
DMSO : 100 mg/mL (246.07 mM; Need ultrasonic)

Alternative Names:
FR2054

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Observed Molecular Weight:
406.39

Product Description

Bicyclomycin benzoate is an antibiotic exhibiting activity against a broad spectrum of Gram-negative bacteria and against the Gram-positive bacterium.

In Vitro: The primary action of bicyclomycin is due to interference with the biosynthesis of lipoprotein and its assembly to peptidoglycan in the cell envelope of *E. coli*. At the lethal level, bicyclomycin is shown to inhibit the synthesis of RNA and protein in the growing cells of *E. coli* 15 THU[1]. Bicyclomycin targets the rho transcription termination factor in *Escherichia coli*. Bicyclomycin is a modest rho inhibitor, can disrupt the rho molecular machinery thereby leading to a catastrophic effect caused by the untimely overproduction of proteins not normally expressed constitutively, thus leading to a toxic effect on the cells[2]. The inhibition of rho poly(C)-stimulated hydrolysis of ATP by bicyclomycin has been found to proceed by a non-competitive, reversible pathway with respect to ATP (K_i=20 μM)[3].

In Vivo: Bicyclomycin has low excretion rate after a single intramuscular dose of 50 mg/kg in rats. Bicyclomycin is well distributed in various tissues, and the highest concentration is observed in the kidney at 100 mg/kg[4].