Data Sheet (Cat.No.T35346)

TargetMol

Tiamulin fumarate

Chemical Properties

CAS No. : 55297-96-6

Formula: C32H51NO8S

Molecular Weight: 609.82

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Tiamulin fumarate (Thiamutilin fumarate) is a semisynthetic diterpenoid antibiotic with antibacterial activity and inhibition of protein synthesis, which can be used to study pneumocystis.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	Tiamulin exhibits high activity against mycoplasma strains (Gloss M. gallisepticum, M. synoviae, M. meleagridis, and M. iowae), spirochetes (Brachyspira hyodysenteriae, Brachyspira innocens, B. pilosicoli, B. intermedia), and Gram-positive bacteria (Staphylococcus, Streptococcus, Clostridium, and Campylobacter spp), but its activity against Gram-negative bacteria (Bordetella, Klebsiella, Haemophilus, Clostridium, Campylobacter, and Corynebacterium spp) is relatively low[1].
In vivo	Tiamulin is highly effective in treating swine dysentery in both breeding and laying hens, with significant efficacy against B. pilosicoli and B. intermedia at a dose of 25 mg/kg body weight per day for 5 consecutive days [1].

Solubility Information

Solubility	H2O: 80.00 mg/mL (131.19 mM),Sonication is recommended. DMSO: 250.00 mg/mL (409.96 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 3.30 mg/mL (5.41 mM),Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (16.4 mM),Suspension. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.6398 mL	8.1991 mL	16.3983 mL
5 mM	0.328 mL	1.6398 mL	3.2797 mL
10 mM	0.164 mL	0.8199 mL	1.6398 mL
50 mM	0.0328 mL	0.164 mL	0.328 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Dreyfuss J, et al. Metabolism of tritium- and carbon-14-labeled tiamulin in dogs, rats, and pigs. J Antibiot (Tokyo). 1979 May;32(5):496-503.