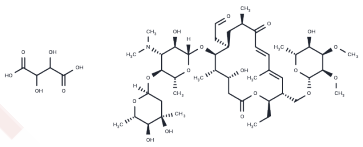
Data Sheet (Cat.No.T0861)

TargetMol

Tylosin tartrate

Chemical Properties



CAS No. : 74610-55-2

Formula: C46H77NO17·C4H6O6

Molecular Weight: 1066.19

Storage: Store under nitrogen
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	Tylosin tartrate, a macrolide antibiotic, is approved for the control of mycoplasmosis in poultry.
Targets(IC50)	Antibacterial,Antibiotic
In vitro	After intravenous administration of 10 mg/kg Tylosin tartrate, dehydrated camels exhibit significantly higher serum drug concentrations, reduced volume of distribution, and lower clearance rates, with a marked decrease in overall drug elimination speed when compared to normal camels. Furthermore, dehydrated camels receiving a 20 mg/kg dose of Tylosin tartrate via intramuscular injection show reduced average absorption time and lower drug concentrations in the serum. Treatment of neonatal piglets with oral Tylosin tartrate (50 mg/kg, twice daily) for 10 consecutive days, starting 14 days post-intranasal infection, significantly mitigates the severity and incidence of gross pulmonary lesions. Tylosin enhances splenocyte proliferation, yielding higher levels of proliferation in the conditioned medium than in chicken whole spleen cell cultures. Additionally, Tylosin increases the anti-tumor activity of chicken splenic cells.
In vivo	Compared to the control group, Tylosin tartrate (25 mg/L) significantly inhibited methane production, indicating that the concentrations commonly found in swine lagoons negatively affect anaerobic metabolism. In anaerobic incubated sludge, the 90% clearance times for Tylosin, its derivatives Tilmicosin and Relomycin ranged from 30 to 130 hours; this reduced to 12 to 26 hours post aeration. The degradation of Tylosin followed a biphasic pattern with a rapid initial loss followed by a slower elimination phase. Under storage conditions in Milli-Q water (pH 5.7-6.7) at 22°C, Tylosin tartrate remained stable for at least one month.

Solubility Information

Solubility	H2O: 183 mg/mL (171.64 mM),Sonication is recommended. DMSO: 276 mg/mL (258.87 mM),Sonication is recommended. Ethanol: 179 mg/mL (167.89 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: 5 mg/mL (4.69 mM),Sonication is recommended. *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	0.9379 mL	4.6896 mL	9.3792 mL
5 mM	0.1876 mL	0.9379 mL	1.8758 mL
10 mM	0.0938 mL	0.469 mL	0.9379 mL
50 mM	0.0188 mL	0.0938 mL	0.1876 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

Loftin KA, et al. Environ Toxicol Chem, 2005, 24(4), 782-788.
Kolz AC, et al. Water Environ Res, 2005, 77(1), 49-56.
Baba T, et al. Poult Sci, 1998, 77(9), 1306-13011.
Hannan PC, et al. Res Vet Sci, 1982, 33(1), 76-88.
Ziv G, et al. J Vet Pharmacol Ther, 1995, 18(4), 299-305.