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产品名称：加米霉素
产品别名：Gamithromycin；ML-1709460

生物活性：

Description	Gamithromycin is an antimicrobial agent which can inhibit the growth of *MmmSC* strains B237 and Tan8 with MICsof 0.00012 and 0.00006 μg/mL, respectively.
IC_{50} & Target	MIC: 0.00012 μg/mL (MmmSC strain B237), 0.00006μg/mL (MmmSC strain Tan8)[1]
In Vitro	The MIC values in serum are significantly lower than those in artificial medium; at an initial inoculum size of 10^6cfu/mL, these are 64-, 8- and 64-fold lower for gamithromycin, tylosin and tilmicosin, respectively, against *MmmSC*strain B237 in serum compare to artificial medium. A similar pattern emerges for Tan8. Heat-inactivation of serum results in an MIC for gamithromycin that is higher than in either non-treated serum or artificial medium[1].
In Vivo	The proportion of foals that recover without the need for a change in treatment is significantly (P<0.048) higher for foals treated with Gamithromycin (GAM) (38 of 40; 95%) or AZM-RIF (39 of 40; 98%) compare to control foals (32 of 41; 78%). The clinical scores, number of abscesses and the abscess scores after 1 and 2 weeks of treatment are significantly lower for foals treated with Gamithromycin (GAM) or AZM-RIF compare to control foals. The WBC count of foals treated with Gamithromycin (GAM) is significantly higher than that of foals treated with AZM-RIF on week 3 of treatment[2].
Solvent&Solubility	***In Vitro:*** **DMSO : 160 mg/mL** (**205.91 mM;** Need ultrasonic and warming)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.2869 mL	6.4347 mL	12.8694 mL
	5 mM	0.2574 mL	1.2869 mL	2.5739 mL
	10 mM	0.1287 mL	0.6435 mL	1.2869 mL

*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。

储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。

References	[1]. Mitchell JD, et al. In vitro pharmacodynamics of gamithromycin against Mycoplasma mycoides subspecies mycoides Small Colony. Vet J. 2013 Sep;197(3):806-11. [2]. F. Hildebrand, et al. Efficacy of Gamithromycin for the Treatment of Foals with Mild to Moderate Bronchopneumonia. J Vet Intern Med. 2015 Jan-Feb; 29(1): 333–338.

实验参考：

Cell Assay	Minimum inhibitory concentrations (MICs) for gamithromycin, tylosin and tilmicosin against *MmmSC* strains B237 and Tan8 are determined using a macrodilution technique. Equal volumes of *MmmSC* culture in logarithmic phase are added to each antimicrobial dilution to give an inoculum size of 10^7 cfu/mL, i.e. the intending initial titre for subsequent time-kill assays, in a volume of 4 mL. Cultures are incubated for 24 h at 37°C. At 0 and 24 h time points, samples are removed and serially diluted 10-fold down to 10^{-5}. Aliquots (10 μL) of each dilution are transferred to solid

	medium; after incubation at 37°C in a humidified atmosphere of 5% carbon dioxide in air for at least 4 days, colonies are counted from the dilution that yields between 30 and 300 colonies per plate. Counts are converted into cfu/mL and MIC is defined as the lowest concentration of antimicrobial that prevents an increase in cfu/mL over 24 h[1].
Animal Administration	Foals with ultrasonographic evidence of pulmonary abscesses are randomly assigned in 3 treatment groups: (1)gamithromycin at a dose of 6.0 mg/kg body weight is administered in the semimembranosus/semitendinosus muscles once a week (GAM; n=40); (2) azithromycin at a dose of 10 mg/kg PO once daily in combination with rifampin at a dose of 10 mg/kg PO once daily (AZM-RIF; n=40); and (3) no antimicrobial treatment (controls; n=41). All the foals in each treatment group also receive acetylcysteine at a dose of 10 mg/kg PO a day to provide the same daily manipulation of the foals in each group[2].
References	[1]. Mitchell JD, et al. In vitro pharmacodynamics of gamithromycin against Mycoplasma mycoides subspecies mycoides Small Colony. Vet J. 2013 Sep;197(3):806-11. [2]. F. Hildebrand, et al. Efficacy of Gamithromycin for the Treatment of Foals with Mild to Moderate Bronchopneumonia. J Vet Intern Med. 2015 Jan-Feb; 29(1): 333–338.