产品名称：法罗培南钠

产品别名：**Faropenem sodium**

生物活性：

Description	Faropenem sodium 是具有口服活性的β-内酰胺抗生素，用于研究治疗肺结核和社区获得性肺炎的试验中。
In Vitro	Faropenem is an orally bioavailable (72 to 84% bioavailability) penem antibiotic that is more resistant to hydrolysis by β-lactamases than cephalosporins and carbapenems are. It efficiently inactivates M. tuberculosis l,d-transpeptidases and exhibits antimycobacterial activity in vitro and in macrophages[1].

Solvent&Solubility

In Vitro:

DMSO : 12 mg/mL (39.04 mM)

Water：61 mg/mL (198.5 mM)

Ethanol：Insoluble

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.2541 mL	16.2707 mL	32.5415 mL
	5 mM	0.6508 mL	3.2541 mL	6.5083 mL
	10 mM	0.3254 mL	1.6271 mL	3.2541 mL
	50 mM	0.0651 mL	0.3254 mL	0.6508 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] Dhar N, et al. Antimicrob Agents Chemother. 2015, 59(2):1308-19.

实验参考：

Cell Assay

细胞实验：[1]

Cell lines: RAW macrophages

Concentrations: 7, 28, or 56 μg/ml

Incubation Time: --

Method:

RAW macrophages were grown in Dulbecco modified Eagle medium containing l-glutamine and sodium pyruvate (PAA Laboratories) supplemented with 10% fetal bovine serum. About 2.5 × 10^4 cells were seeded into each well of a 48-well plate and were infected with green fluorescent protein (GFP)-expressing M. tuberculosis (MTB_NDT1) at a multiplicity of infection (MOI) of 10:1 for 4 h. After infection, the monolayers were washed three times with fresh medium to remove nonadherent bacteria and then exposed to fresh medium with or without isoniazid (0.75 μg/ml), faropenem (7, 28, or 56 μg/ml), or meropenem (5, 25, or 50 μg/ml) plus clavulanate (2.5 μg/ml). Medium (containing antibiotics) was changed every 24 h. At various time points, macrophages were washed once with 1× PBS and then lysed using 0.5% Triton X-100. The macrophage lysates were diluted in PBS containing 0.05% Tween 80, serial dilutions were plated on 7H10 agar, and bacterial CFU were enumerated after incubation of the plates at 37°C for 3 to 4 weeks. For analysis of the infected macrophages by flow cytometry, the cells were washed once with 1× PBS before being resuspended in PBS. Cells were analyzed by flow cytometry using a BD Accuri C6 flow cytometer. The threshold was set at 80,000, gates were drawn to exclude clumps and debris, and 50,000 gated

	events were acquired for each sample. RAW macrophages infected with nonfluorescent M. tuberculosis were used to determine the background fluorescence gates. The fraction of infected cells was calculated from the number of events exhibiting fluorescence above this background level.
Animal Administration	**动物实验：**[1] **Animal Models:** Adult female C57BL/6J mice **Formulation:** 1% methylcellulose in PBS **Dosages:** 500 mg/kg **Administration:** oral
References	[1] Dhar N, et al. Antimicrob Agents Chemother. 2015, 59(2):1308-19.