产品名称：Solithromycin
产品别名：索利霉素 ； CEM-101; OP-1068

生物活性：

Description	Solithromycin (CEM-101) is an orally bioavailable, effective antimicrobial agent, with IC50s for inhibition of cell viability, protein synthesis, and growth rate are 7.5 ng/mL, 40 ng/mL, and 125 ng/mL for Streptococcus pneumonia, Staphylococcus aureus, and Haemophilus influenzae, respectively. Solithromycin binds to the large 50S subunit of the ribosome and inhibits protein biosynthesis[1].
IC_{50} & Target	Bacterial[1]
In Vitro	The IC50s values for Solithromycin on TNFα and CXCL8 release are 41.6 μM and 78.2 μM, respectively. Solithromycin markedly reduces MMP9 activity, with an IC50 of 14.9 μM[2]. Solithromycin (0-333 μM; 72 hours; U937 and PBMC cells) suppresses lipopolysaccharide-induced TNFα release and phorbol 12-myristate 13-acetate (PMA)-induced matrix metalloproteinase 9 (MMP9) activity, and does not affect cell viability in monocytic U937 and PBMC cells[2].
In Vivo	Solithromycin (100 mg/kg; oral administration; every day; for 8 days; C57BL/6J mice) treatment inhibits inflammatory cells accumulation and pro-MMP9 production in cigarette smoke-exposed mice[2].

Animal Model:	C57BL/6J mice (male, 4 weeks)[2]
Dosage:	100 mg/kg
Administration:	Oral administration; every day; for 8 days
Result:	Inhibited cigarette smoke-induced neutrophilia and pro-MMP9 production.

Solvent&Solubility

In Vitro:

DMSO : ≥ 32 mg/mL (37.87 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.1834 mL	5.9171 mL	11.8342 mL
	5 mM	0.2367 mL	1.1834 mL	2.3668 mL
	10 mM	0.1183 mL	0.5917 mL	1.1834 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。

In Vivo:

请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 **In Vitro** 方式配制澄清的储备液，再依次添加助溶剂：

——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶

1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline

Solubility: ≥ 2.5 mg/mL (2.96 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (2.96 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；

	向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。 2.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (2.96 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (2.96 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Rodgers W, et al. Solithromycin inhibition of protein synthesis and ribosome biogenesis in Staphylococcus aureus,Streptococcus pneumoniae, and Haemophilus influenzae. Antimicrob Agents Chemother. 2013 Apr;57(4):1632-1637. [2]. Kobayashi Y, et al. A novel macrolide solithromycin exerts superior anti-inflammatory effect via NF-κB inhibition. J Pharmacol Exp Ther. 2013 Apr;345(1):76-84.