上海源叶生物科技有限公司
Shanghai yuanye Bio-Technology Co., Ltd
电话：021-61312973　　传真：021-55068248
网址：www.shyuanye.com
邮箱：shyysw@sina.com

产品名称：
6-chloro-2-ethyl-N-[(4-{4-[4-(trifluoromethoxy)phenyl]piperidin-1-yl}phenyl)methyl]imidazo[1,2-a]pyridine-3-carboxamide
产品别名：Q203；IAP6; Telacebec

生物活性：

Description	Q203 (IAP6) is a midazopyridine amide compound. Q203 is active against Mycobacterium tuberculosis H37Rv with an MIC50 of 2.7 nM in culture broth medium.
IC_{50} & Target	MIC50: 2.7 nM (Mycobacterium tuberculosis H37Rv) [1]
In Vitro	Imidazopyridine amide (IPA) compounds block Mycobacterium tuberculosis growth by targeting the respiratory cytochrome bc1 complex. The optimized IPA compound Q203 inhibits the growth of MDR and XDR Mycobacterium tuberculosis clinical isolates in culture broth medium in the low nanomolar range. Q203 is active against the reference strain Mycobacterium tuberculosis H37Rv with MIC50s of 2.7 nM in culture broth medium and 0.28 nM inside macrophages[1].
In Vivo	Q203 is efficacious in a mouse model of tuberculosis at a dose less than 1 mg per kg body weight. Q203 displays pharmacokinetic and safety profiles compatible with once-daily dosing. Q203 has a bioavailability of 90% and a terminal half-life of 23.4 h. The volume of distribution is moderate (5.27 l per kg body weight), and the systemic clearance is low (4.03 mL/min per kg). After 4 weeks of treatment, reductions of 90%, 99% and 99.9% in M. tuberculosis H37Rv bacterial load is observed in the groups treated with Q203 at 0.4, 2 and 10 mg per kg body weight, respectively[1].
Solvent&Solubility	***In Vitro:*** **DMSO : 20 mg/mL** (**35.91 mM;** Need ultrasonic) **H_2O : < 0.1 mg/mL** (insoluble)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.7953 mL	8.9765 mL	17.9530 mL
	5 mM	0.3591 mL	1.7953 mL	3.5906 mL
	10 mM	0.1795 mL	0.8976 mL	1.7953 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→ 90% (20% SBE-β-CD in saline)

Solubility: 2 mg/mL (3.59 mM); Suspended solution; Need ultrasonic

	此方案可获得 2 mg/mL (3.59 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例，取 100 μL 20.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。
References	[1]. Pethe K, et al. Discovery of Q203, a potent clinical candidate for the treatment of tuberculosis. Nat Med. 2013 Sep;19(9):1157-60.

实验参考：

Animal Administration	Rats: Sprague Dawley rats are used for pharmacokinetic studies. Compounds (Q203) are given at a dose of 2 mg per kg body weight intravenously or 10 mg per kg body weight orally. The compounds (Q203) are formulated in 20% TPGS (d-α tocopheryl polyethylene glycol 1000 succinate) for repeated-dose studies and in 40% PEG400, pH4 for single-dose studies. Blood samples are taken through the caudal vena cava using 1-mL syringes before perfusion. Samples are collected from three mice or rats at 0.5, 1, 2, 6, 12, 24 and 48 h post-dose. Blood samples are centrifuged at 3,200g for 10 min at 4 °C. Following centrifugation, plasma is collected and frozen until further analysis. Compound concentrations are determined by LC-MS[1]. Mice: Efficacy of Q203 in a mouse model of established tuberculosis is studied. Bacterial loads are enumerated in the lung of infected mice after 14 d and 28 d of treatment. Q203 is used at 0.4, 2 and 10 mg per kg body weight. Bedaquiline and isoniazid (INH) are used as positive controls at 6.5 and 15 mg per kg body weight, respectively. Five mice per group and per time point are used[1].
References	[1]. Pethe K, et al. Discovery of Q203, a potent clinical candidate for the treatment of tuberculosis. Nat Med. 2013 Sep;19(9):1157-60.