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产品名称：MK-6892
产品别名：MK-6892

生物活性：

Description	MK-6892 is a potent, selective, and full agonist for the high affinity nicotinic acid (NA) receptor GPR109A. K_i and GTPγS EC_{50} of MK-6892 on the Human GPR109A is 4 nM and 16 nM, respectively.
IC_{50} & Target	Ki: 4 nM (GPR109A)[1] EC50: 16 nM (GPR109A)[1]
In Vitro	MK-6892 evokes a potent internalization of GPR109A in U2OS β-arrestin2-RrGFP cells.MK-6892 shows an EC50 value of 74 nM on calcium mobilization assay[2].
In Vivo	MK-6892 is orally administered to WT or nicotinic acid (NA) receptor null mice on the same C57Bl/6 genetic background. After 15 min of 100 mg/kg dosing of MK-6892 to fed WT or NA receptor null mice, the blood levels of MK-6892 at 15 min are 229 μM (~950-fold greater than the in vitro EC50 determined in mouse NA receptor GTPγS assay, which is 240 nM) in WT mice and 148 μM (~620-fold greater than the in vitro EC50) in NA receptor null mice. MK-6892 effectively suppresses plasma FFA in the WT but not in the NA receptor null animals, indicating that the FFA reduction of MK-6892 is NA receptor-dependent. MK-6892 is selected for the studies because of its good PK and activity profiles in these two species (EC50=4.6 μM in the GTPγS assay for the rat NA receptor and 1.3 μM in the GTPγS assay for the dog NA receptor). Despite the significant weaker activity of MK-6892 in rat and dog with respect to that in human, MK-6892 shows good activity in reducing FFA in rat and dog models[1].
Solvent&Solubility	***In Vitro:*** **DMSO： 50 mg/mL (129.40 mM;** Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5880 mL	12.9400 mL	25.8799 mL
	5 mM	0.5176 mL	2.5880 mL	5.1760 mL
	10 mM	0.2588 mL	1.2940 mL	2.5880 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 (6.47 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.47 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% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.47 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 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (6.47 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.47 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]. Shen HC, et al. Discovery of a biaryl cyclohexene carboxylic acid (MK-6892): a potent and selective high affinity niacin receptor full agonist with reduced flushing profiles in animals as a preclinical candidate. J Med Chem. 2010 Mar 25;53(6):2666-70. [2]. Kim HY, et al. Discovery of 4-(phenyl)thio-1H-pyrazole derivatives as agonists of GPR109A, a high affinity niacin receptor. Arch Pharm Res. 2015 Jun;38(6):1019-32.