产品名称：GSK429286A
产品别名：GSK429286A

生物活性：

Description	GSK429286A is a selective inhibitor of ROCK1 with an IC_{50} value of 14 nM.		
IC_{50} & Target	ROCK1	RSK	p70S6K
	14 nM (IC_{50})	780 nM (IC_{50})	1940 nM (IC_{50})
In Vitro	GSK429286A at 1 μM reduces ROCK2 activity over 20-fold, under conditions in which the only other kinase tested that is significantly inhibited is MSK1 whose activity is reduced ~5-fold. GSK429286A is a more selective ROCK2 inhibitor than the widely utilized ROCK inhibitor Y-27632 as assessed on kinase-specificity panel, and does not significantly inhibit LRRK2 even at doses as high as 30 μM (500-fold higher than IC50 of inhibition of ROCK2). GSK429286A slightly inhibits RSK and p70S6K with IC50 of 0.78 μM and 1.94 μM, respectively. GSK429286A significantly inhibits rat aortic ring dilation with IC50 of 190 nM[2].		
In Vivo	GSK429286A has 61% oral bioavailability in male Sprague-Dawley rats. Oral administration of GSK429286A at single doses of 3-30 mg/kg dramatically reduces mean arterial pressure in the spontaneously hypertensive rats (SHRs) in a dose-dependent manner, with a maximum decrease of 50 mmHg after approximately 2 hours treatment at dose of 30 mg/kg[1].		

Solvent&Solubility

In Vitro:

DMSO : ≥ 51 mg/mL (117.95 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3128 mL	11.5642 mL	23.1283 mL
	5 mM	0.4626 mL	2.3128 mL	4.6257 mL
	10 mM	0.2313 mL	1.1564 mL	2.3128 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: ≥ 2.08 mg/mL (4.81 mM); Clear solution

此方案可获得 ≥ 2.08 mg/mL (4.81 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 20.8 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: ≥ 2.08 mg/mL (4.81 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (4.81 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 20.8 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: ≥ 2.08 mg/mL (4.81 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (4.81 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 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Goodman KB et al Development of dihydropyridone indazole amides as selective Rho-kinase inhibitors. J Med Chem. 2007 Jan 11;50(1):6-9. [2]. Nichols RJ et al Substrate specificity and inhibitors of LRRK2, a protein kinase mutated in Parkinson's disease. Biochem J. 2009 Oct 23;424(1):47-60.

实验参考：

Animal Administration	Rats: Spontaneously hypertensive rats (SHRs) are treated with GSK429286A to establish its effect on mean arterial pressure. Compound is administered by single dose oral gavage (3, 10, 30 mg/kg)[1].
References	[1]. Goodman KB et al Development of dihydropyridone indazole amides as selective Rho-kinase inhibitors. J Med Chem. 2007 Jan 11;50(1):6-9. [2]. Nichols RJ et al Substrate specificity and inhibitors of LRRK2, a protein kinase mutated in Parkinson's disease. Biochem J. 2009 Oct 23;424(1):47-60.