产品名称：GSK'481
产品别名：GSK481

生物活性：

Description	GSK'481 (GSK481) is a highly potent, selective, and specific receptor interacting protein 1 (RIP1) kinase inhibitor with an IC50 of 1.3 nM, which inhibits Ser166 phosphorylation in wild-type human RIP1 (IC50=2.8 nM). GSK'481 also exhibits excellent translation in the U937 cellular assay with an IC50 of 10 nM[1].
IC_{50} & Target	IC50: 1.3 nM (RIP1), 2.8 nM (Ser^{166} phosphorylation in wild-type human RIP1)[1]
In Vitro	GSK'481 (300 nM; 2 hours; Jurkat cells) abrogates the RIP3 up-regulation induces by both TNFa and shikonin in live and dead cells, indicating that necroptosis is in fact induced by both agents[2].

Apoptosis Analysis[2]

Cell Line:	Jurkat cells
Concentration:	300 nM
Incubation Time:	2 hours
Result:	Increased levels of detectable apoptosis induced by TNFa and shikonin.

In Vivo

GSK'481 (GSK481) inhibits Ser^{166} phosphorylation in three mouse RIP1 mutants (IC50=18~110 nM) more potently than in wild-type mouse[1].

Solvent&Solubility

In Vitro:

DMSO : ≥ 35 mg/mL (92.74 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	2.6498 mL	13.2489 mL	26.4978 mL
	5 mM	0.5300 mL	2.6498 mL	5.2996 mL
	10 mM	0.2650 mL	1.3249 mL	2.6498 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 (6.62 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.62 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 (6.62 mM); Suspended solution; Need ultrasonic

	此方案可获得 2.5 mg/mL (6.62 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 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 (6.62 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.62 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]. Harris PA et al. DNA-Encoded Library Screening Identifies Benzo[b][1,4]oxazepin-4-ones as Highly Potent and Monoselective Receptor Interacting Protein 1 Kinase Inhibitors. J Med Chem, 2016 Mar 10, 59(5):2163-78. [2]. Lee HL, et al. Simultaneous flow cytometric immunophenotyping of necroptosis, apoptosis and RIP1-dependent apoptosis. Methods. 2018 Feb 1;134-135:56-66.