产品名称：**SKI II**
产品别名：**SKI II**

生物活性：		
Description	SKI-II is an oral active and synthetic inhibitor of sphingosine kinase (SK) activity, with IC50 values of 78 μM and 45 μM for SK1 and for SK2, respectively. SKI II causes an irreversible inhibition of SK1 by inducing its lysosomal and/or proteasomal degradation[1][2].	
IC_{50} & Target	IC50 value: 78/45 μM (SK1/2)[1][2].	
In Vitro	SKI II inhibits cell proliferation by suppressing the Wnt/β-catenin signaling pathway. SKI II promotes the degradation of β-catenin by enhancing Wnt5A[1]. SKI II (1.25 μM, 48 h) in combination with DDP has a clear synergistic effect in human gastric carcinoma SGC7901/DDP cell line[2].	
	Cell Cytotoxicity Assay[1]	
	Cell Line:	The human gastric carcinoma SGC7901/DDP cell line.
	Concentration:	0 μM, 1.25 μM (combined with DDP).
	Incubation Time:	48 hours.
	Result:	SKI II in combination with DDP had a greater effect on the SGC-7901/DDP cells compared with DDP or SKI II alone.
In Vivo	Chronic SKI II (50.0 mg/kg, 3-weekly i.p. for 16 weeks) administration leads to permanent reduction of S1P concentrations in plasma in mice[3]. SKI II (50.0 mg/kg, IP; 100 mg/kg, PO) treatment reduces tumor growth in mice bearing solid tumor model[4].	
	Animal Model:	8 week-old female LDL-R-/- mice[3].
	Dosage:	50.0 mg/kg.
	Administration:	IP injection daily, 3 days a week for 16 weeks.
	Result:	A single administration of produced a significant reduction of plasma S1P with the maximum (~40%) observed 12 h after injection. At sacrifice (72 h after last injection) S1P levels were 266 ± 18 ng/mL and 328 ± 30 ng/mL in the SKI-II-treated and control groups, respectively.
	Animal Model:	BALB/c mouse solid tumor model that uses JC mammary adenocarcinoma cells[4].
	Dosage:	50.0 mg/kg.
	Administration:	IP injection daily, 3 days a week for 16 weeks.
	Result:	Had strong inhibition of tumor growth from the start of treatment of 65%, with no toxicity or weight loss.
	Animal Model:	BALB/c JC tumor model[4].
	Dosage:	100 mg/kg.
	Administration:	PO every other day.
	Result:	Caused significant antitumor activity in well-established tumors as early as day 5, with maximal response seen at the end of the study. Showed 79% inhibition of tumor growth from the start of treatment.
	In Vitro:	

Solvent&Solubility

DMSO : ≥ 100 mg/mL (330.27 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3027 mL	16.5136 mL	33.0273 mL
	5 mM	0.6605 mL	3.3027 mL	6.6055 mL
	10 mM	0.3303 mL	1.6514 mL	3.3027 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: ≥ 2.75 mg/mL (9.08 mM); Clear solution

此方案可获得 ≥ 2.75 mg/mL (9.08 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 27.5 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: ≥ 2.75 mg/mL (9.08 mM); Clear solution

此方案可获得 ≥ 2.75 mg/mL (9.08 mM，饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μL 27.5 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]. Liu H, et al. SphK1 inhibitor SKI II inhibits the proliferation of human hepatoma HepG2 cells via the Wnt5A/β-catenin signaling pathway. Life Sci. 2016 Apr 15;151:23-9.

[2]. Potì F, et al. SKI-II--a sphingosine kinase 1 inhibitor--exacerbates atherosclerosis in low-density lipoprotein receptor-deficient (LDL-R-/-) mice on high cholesterol diet. Atherosclerosis. 2015 May;240(1):212-5.

[3]. Liu Y, et al. SKI-II reverses the chemoresistance of SGC7901/DDP gastric cancer cells. Oncol Lett. 2014 Jul;8(1):367-373.

[4]. French KJ, et al. Antitumor activity of sphingosine kinase inhibitors. J Pharmacol Exp Ther. 2006 Aug;318(2):596-603.