产品名称：**STF-31**
产品别名：**STF-31**

生物活性：

Description

STF-31 is an inhibitor of glucose transporter 1 (GLUT1, IC50 = 1 μM). IC50 value: 1 μM Target: GLUT1 in vitro: STF 31 is a glucose uptake inhibitor in RCC (renal cell carcinoma) 4 cells. By limiting glucose uptake in cancer cells, the immense energy requirements for the cancer cell is not met and the cell does not have the resources to rapidly proliferate.STF-31, which selectively kills RCCs by specifically targeting glucose uptake through GLUT1 and exploiting the unique dependence of these cells on GLUT1 for survival. STF-31 decreases glycolysis by decreasing glucose transport and not by inhibiting a particular glycolytic step or enzyme.[1] in vivo: STF-31 selectively targets the von Hippel-Lindau (VHL)-deficient kidney cancer cells. STF-31 inhibits VHL-deficient cancer cells by inhibiting Glut1. Daily intraperitoneal injection of a soluble analogue of STF-31 effectively reduces the growth of tumors of VHL-deficient cancer cells grafted on nude mice. On the other hand, STF-31 appears to be an inhibitor with a narrow cell target spectrum.[2]

Solvent&Solubility

In Vitro:

DMSO : ≥ 34 mg/mL (80.28 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3611 mL	11.8055 mL	23.6111 mL
	5 mM	0.4722 mL	2.3611 mL	4.7222 mL
	10 mM	0.2361 mL	1.1806 mL	2.3611 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 (5.90 mM); Clear solution; Need ultrasonic

此方案可获得 2.5 mg/mL (5.90 mM)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 (5.90 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (5.90 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。

References	[1]. Chan DA, et al. Targeting GLUT1 and the Warburg effect in renal cell carcinoma by chemical synthetic lethality. Sci Transl Med. 2011 Aug 3;3(94):94ra70. [2]. Liu Y, et al. A small-molecule inhibitor of glucose transporter 1 downregulates glycolysis, induces cell-cycle arrest, andinhibits cancer cell growth in vitro and in vivo. Mol Cancer Ther. 2012 Aug;11(8):1672-1682.