产品名称：**LF3**
产品别名：**LF3**

生物活性：

Description	LF3 is an antagonist of the β-Catenin/TCF4 interaction with antitumor activity; has an IC_{50} of 1.65 μM.
IC_{50} & Target	IC50: 1.65 μM (β-Catenin/TCF4, AlphaScreen), 1.82 μM (β-Catenin/TCF4, ELISA)[1]
In Vitro	LF3 inhibits Wnt/β-catenin signals in cells with exogenous reporters and in colon cancer cells with endogenously high Wnt activity. LF3 also suppresses features of cancer cells related to Wnt signaling, including high cell motility, cell-cycle progression, and the overexpression of Wnt target genes. However, LF3 does not cause cell death or interfere with cadherin-mediated cell-cell adhesion. Remarkably, the self-renewal capacity of cancer stem cells is blocked by LF3 in concentration-dependent manners[1].
In Vivo	LF3 reduces tumor growth and induces differentiation in a mouse xenograft model of colon cancer. Tumor growth is significantly reduced when mice with GFP^{high} cells are treated with LF3 at 50 mg/kg. LF3 treatment does not disturb the normal histology of the gut of mice[1].

Solvent&Solubility

In Vitro:

DMSO : ≥ 32 mg/mL (76.82 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.4006 mL	12.0031 mL	24.0061 mL
	5 mM	0.4801 mL	2.4006 mL	4.8012 mL
	10 mM	0.2401 mL	1.2003 mL	2.4006 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 (6.00 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.00 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 (6.00 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.00 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 (6.00 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.00 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]. Fang L, et al. A Small-Molecule Antagonist of the β-Catenin/TCF4 Interaction Blocks the Self-Renewal of Cancer Stem Cells and Suppresses Tumorigenesis. Cancer Res. 2016 Feb 15;76(4):891-901.

实验参考：

Cell Assay	LF3 is dissolved in DMSO to a concentration of 50 mM and diluted with culture medium. Two colon cancer cell lines (HCT116 and HT29) and a breast cancer cell line (MCF7) are treated with LF3 (0, 30, 60 μM) for 24 hours and labeled with BrdUrd for 4 to 5 hours to detect proliferating cells[1].
Animal Administration	Mice: Unsorted GFP^{low} and GFP^{high} SW480 cells are subcutaneously injected into the back skin of NOD/SCID mice. Tumor growth is monitored over a period of 45 days. For therapy, LF3 is administered i.v. at 50 mg/kg body weight for three rounds over 5 consecutive days, with 2-day breaks[1].
References	[1]. Fang L, et al. A Small-Molecule Antagonist of the β-Catenin/TCF4 Interaction Blocks the Self-Renewal of Cancer Stem Cells and Suppresses Tumorigenesis. Cancer Res. 2016 Feb 15;76(4):891-901.