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产品名称：BCI-121
产品别名：BCI-121

生物活性：

Description	BCI-121 is a SMYD3 inhibitor that impairs the proliferation of cancer cell.
In Vitro	BCI-121 significantly inhibits SMYD3-substrate interaction and chromatin recruitment and is effective in reducing proliferation in various cancer cells types. BCI-121 significantly reduces proliferation of HT29 (by 46%) and HCT116 (by 54%) cells at 72 h and decreases the expression levels of SMYD3 target genes. SMYD3 preferentially methylates histone H4, and the presence of BCI-121 impairs SMYD3-mediated H4 in vitro methylation. Cancer cells treated with BCI-121 show a significant reduction in their growth ability and accumulated in the S phase of the cell cycle. Cells treated with BCI-121 shows a dose-dependent relationship between SMYD3 impairment and both inhibition of proliferation and reduction of targeted methyl marks (H4K5me and H3K4me2). BCI-121 shows antiproliferative properties in cancer cell lines overexpressing SMYD3 and, in general, replicated the effects of SMYD3-targeted RNAi. Experiments performed in cancer cells show that BCI-121 prevents SMYD3 recruitment on the promoters of its target genes and this event is correlated with reduced gene expression[1].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 100 mg/mL (293.93 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9393 mL	14.6964 mL	29.3927 mL
	5 mM	0.5879 mL	2.9393 mL	5.8785 mL
	10 mM	0.2939 mL	1.4696 mL	2.9393 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 (8.08 mM); Clear solution

此方案可获得 ≥ 2.75 mg/mL (8.08 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 (8.08 mM); Clear solution 此方案可获得 ≥ 2.75 mg/mL (8.08 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。 3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.75 mg/mL (8.08 mM); Clear solution 此方案可获得 ≥ 2.75 mg/mL (8.08 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 27.5 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Peserico A, et al. A SMYD3 Small-Molecule Inhibitor Impairing Cancer Cell Growth. J Cell Physiol. 2015 Oct;230(10):2447-2460.
实验参考：	
Cell Assay	Cell proliferation is determined using the cell proliferation reagent WST-1. Cells are seeded into 96-well plates one day before treatment. After 48 h, 72 h, or 96 h of BCI-121 or DMSO exposure, 10 μL of the Cell Proliferation Reagent WST-1 are added to each well and incubated at 37 °C in a humidified incubator for up to 1 h. Absorbance is measured on a microplate reader at 450/655 nm. The proliferation index is calculated as the ratio of WST-1 absorbance of treated cells to WST-1 absorbance of control cells[1].
References	[1]. Peserico A, et al. A SMYD3 Small-Molecule Inhibitor Impairing Cancer Cell Growth. J Cell Physiol. 2015 Oct;230(10):2447-2460.