产品名称：PNU-74654
产品别名：PNU-74654

生物活性：

Description	PNU-74654 is an inhibitor of Wnt/β-catenin pathway with an IC50 of 129.8 μM in NCI-H295 cell.
IC_{50} & Target	129.8 μM (Wnt/β-catenin, NCI-H295 cell)[1]
In Vitro	PNU-74654 binds to β-catenin with a KD of 450 nM. The Tcf3/Tcf4-binding surface on β-catenin contains a well-defined hot spot around residues K435 and R469. The binding mode of PNU-74654 involves the two narrow pockets on either side of this hot spot[2]. In NCI-H295 cells,PNU-74654 significantly decreases cell proliferation 96 h after treatment, increases early and late apoptosis, decreases nuclear beta-catenin accumulation, impairs CTNNB1/beta-catenin expression and increases beta-catenin target genes 48 h after treatment. No effects are observed on HeLa cells. In NCI-H295 cells, PNU-74654 decreases cortisol, testosterone and androstenedione secretion 24 and 48 h after treatment. The SF1 and CYP21A2 mRNA expression as well as the protein levels of STAR and aldosterone synthase are decreased in NCI-H295 cells after 48 h PNU-74654 treatment. In Y1 cells, PNU-74654 impairs corticosterone secretion 24 h after treatment but does not decrease cell viability[1].
Solvent&Solubility	***In Vitro:*** **DMSO : ≥ 30 mg/mL (93.65 mM)** * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1217 mL	15.6084 mL	31.2168 mL
	5 mM	0.6243 mL	3.1217 mL	6.2434 mL
	10 mM	0.3122 mL	1.5608 mL	3.1217 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 (7.80 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (7.80 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% corn oil

Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (7.80 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]. Leal LF, et al. Inhibition of the Tcf/beta-catenin complex increases apoptosis and impairs adrenocortical tumor cell proliferation and adrenal steroidogenesis. Oncotarget. 2015 Dec 15;6(40):43016-32. [2]. Trosset JY, et al. Inhibition of protein-protein interactions: the discovery of druglike beta-catenin inhibitors by combining virtual and biophysical screening. Proteins. 2006 Jul 1;64(1):60-7.

实验参考：

Cell Assay	The PNU-74654 compound is dissolved in DMSO at stock concentrations of 31.2 mM. For working solutions, PNU-74654 is diluted 100X in growth medium with no serum deprivation. NCI-H295 cells are plated at 200,000 cells per well in 24-well plates for gene expression, protein analysis and adrenal steroid measurements. After 48 h, cells are treated with vehicle (0.1%-0.4% DMSO) or 10, 50, 100 and 200 μM PNU-74654. After 24 and 48 h, medium supernatants are collected for adrenal steroid measurements[1].
References	[1]. Leal LF, et al. Inhibition of the Tcf/beta-catenin complex increases apoptosis and impairs adrenocortical tumor cell proliferation and adrenal steroidogenesis. Oncotarget. 2015 Dec 15;6(40):43016-32. [2]. Trosset JY, et al. Inhibition of protein-protein interactions: the discovery of druglike beta-catenin inhibitors by combining virtual and biophysical screening. Proteins. 2006 Jul 1;64(1):60-7.