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产品名称：MN-64
产品别名：MN-64

生物活性：

Description	MN-64 is a potent tankyrase 1 inhibitor, with IC50s of 6 nM, 72 nM, 19.1 μM, and 39.4 μM for TNKS1, TNKS2, ARTD1 and ARTD2, respectively.

IC_{50} & Target	TNKS1	TNKS2	ARTD1	ARTD2
	6 nM (IC_{50})	72 nM (IC_{50})	19.1 μM (IC_{50})	39.4 μM (IC_{50})

In Vitro	MN-64 is a potent tankyrase 1 inhibitor, with IC50s of 6 nM, 72 nM, 19.1 μM, 39.4 μM for TNKS1, TNKS2, ARTD1 and ARTD2, respectively. MN-64 effectively inhibits Wnt/β-catenin at 1 μM, and blocks STF luciferase activity at 200 nM[1].

Solvent&Solubility

In Vitro:

DMSO : 100 mg/mL (**378.33 mM;** Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	**1 mg**	**5 mg**	**10 mg**
	1 mM	3.7833 mL	18.9165 mL	37.8329 mL
	5 mM	0.7567 mL	3.7833 mL	7.5666 mL
	10 mM	0.3783 mL	1.8916 mL	3.7833 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 (9.46 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.46 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 (9.46 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.46 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 (9.46 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.46 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]. Narwal M, et al. Discovery of tankyrase inhibiting flavones with increased potency and isoenzyme selectivity. J Med Chem. 2013 Oct 24;56(20):7880-9.
实验参考：	
Kinase Assay	Inhibitory potency of compounds on Tankyrase-1 enzymatic activity is evaluated using a Scintillation Proximity Assay (SPA). The assay is designed to measure compound inhibition of Tankyrase-1 autoPARsylation (Tankyrase-1 is both enzyme and substrate in this assay). Truncated recombinant human Tankyrase-1 protein (amino acids E1023-T1327) is purified from SF9 cells. The assay is conducted using 0.11 μM of Tankyrase-1 protein and 3 μM nicotinamide adenine dinucleotide (NAD^+, 2.12 μM ^3H-NAD^+ with a specific radioactivity of 1690 Ci/mol, 0.88 μM biotin- NAD^+), in pH 7.5 Tris buffer (60 mM Tris, 1 mM DTT, 0.01% (v/v) Tween-20®, 2.5 mM $MgCl_2$, 0.3 mg/mL BSA). For IC_{50} determination, 10 mM DMSO stock solution of a compound (MN-64) is sequentially diluted by two-fold in DMSO, and aliquots of the diluted solutions are transferred to 384-well assay plates and mixed with Tankyrase-1 solution[1].
References	[1]. Narwal M, et al. Discovery of tankyrase inhibiting flavones with increased potency and isoenzyme selectivity. J Med Chem. 2013 Oct 24;56(20):7880-9.