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产品名称：PSI-6130
产品别名：R 1656

生物活性：

Description	PSI-6130 is a potent and selective inhibitor of HCV NS5B polymerase, and inhibits HCV replication with a mean IC_{50} of 0.6 μM.
IC_{50} & Target	IC50: 0.6 μM (HCV replication)[2]
In Vitro	PSI-6130 exhibits potent and specific inhibitory activity against HCV RNA replication mediated by the NS5B polymerase. Both PSI-6130 inhibit HCV GT-1b (Con1 strain) and GT-1a (H77 strain) subgenomic RNA replication, with mean EC_{50} values of 0.51 and 0.30 μM, respectively. PSI-6130 inhibits 40% human serum with EC_{50} of 0.51 μM[1]. PSI-6130 inhibits HCV replication with a mean IC_{50} of 0.6 μM, PSI-6130-TP inhibits HCV replicase with a mean IC_{50} of 0.34 μM. PSI-6130-TP inhibits recombinant HCV Con1 NS5B on a heteropolymeric RNA template derived from the 3′-end of the negative strand of the HCV genome with an IC_{50} of 0.13 μM and K_i of 0.023 μM[2].

Solvent&Solubility

In Vitro:

DMSO : ≥ 50 mg/mL (192.88 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.8576 mL	19.2879 mL	38.5758 mL
	5 mM	0.7715 mL	3.8576 mL	7.7152 mL
	10 mM	0.3858 mL	1.9288 mL	3.8576 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 (9.64 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.64 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 (9.64 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.64 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 (9.64 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (9.64 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]. Ali S, et al. Selected replicon variants with low-level in vitro resistance to the hepatitis C virus NS5B polymerase inhibitor PSI-6130 lack cross-resistance with R1479. Antimicrob Agents Chemother. 2008 Dec;52(12):4356-69. [2]. Ma H, et al. Characterization of the metabolic activation of hepatitis C virus nucleoside inhibitor beta-D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) and identification of a novel active 5'-triphosphate species. J Biol Chem. 2007 Oct 12;282(41):29812-20. Epub 2007 Aug 13.
实验参考：	
Kinase Assay	The inhibition potency of compounds with respect to the RdRp activity of recombinant NS5B570-BK, NS5B570-Con1, and NS5B570-H77 proteins is determined by measuring the incorporation of radiolabeled NMP into acid-insoluble RNA products by use of a complement strand of internal ribosomal entry site (cIRES) RNA template. Briefly, 50% inhibitory concentration (IC_{50}) determinations are carried out using 200 nM in vitro-transcribed cIRES RNA template, 1 μCi of tritiated UTP (42 Ci/mmol), 500 μM ATP, 500 μM GTP, 1 μM CTP, 1× TMDN buffer (40 mM Tris-HCl [pH 8.0], 4 mM $MgCl_2$, 4 mM dithiothreitol, 40 mM NaCl), and 200 nM enzyme. The inhibition potency of compounds with respect to the RdRp activity of NS5B570-S282T-Con1 is determined under GT-1b assay conditions as. NS5B570-BK and NS5B570-Con1 enzymes are used as controls. The final reaction volume is 50 μL under all assay conditions. All reactions contain a final 10% dimethyl sulfoxide. K_m and K_i values are measured. [1]
References	[1]. Ali S, et al. Selected replicon variants with low-level in vitro resistance to the hepatitis C virus NS5B polymerase inhibitor PSI-6130 lack cross-resistance with R1479. Antimicrob Agents Chemother. 2008 Dec;52(12):4356-69. [2]. Ma H, et al. Characterization of the metabolic activation of hepatitis C virus nucleoside inhibitor beta-D-2'-Deoxy-2'-fluoro-2'-C-methylcytidine (PSI-6130) and identification of a novel active 5'-triphosphate species. J Biol Chem. 2007 Oct 12;282(41):29812-20. Epub 2007 Aug 13.