产品名称：CPI-203
产品别名：CPI-203

生物活性：

Description	CPI-203 is a novel potent, selective and cell permeable inhibitor of BET bromodomain, with an IC50 value of appr 37 nM (BRD4 α-screen assay).
IC_{50} & Target	IC50: 37 nM (BRD4)
In Vitro	CPI-203 inhibits BRD4 in vitro and in cells, but does not affect BRD4 kinase activity in vitro[1]. CPI-203 exerts a cytostatic effect in all the 9 MCL cell lines analyzed with GI50 ranging from 0.06 to 0.71 μM, with low cytotoxicity in normal PBMCs from healthy donors. Furthermore, CPI-203 efficiently activates the cell death program in MCL cells[2].
In Vivo	CPI-203 (2.5 mg/kg, i.p.) combined with lenalidomide, enhances the antitumoral properties of each single agent via the abrogation of MYC and IRF4 expression and the induction of apoptosis in n REC-1 tumor-bearing mice[2].

Solvent&Solubility

In Vitro:

DMSO : ≥ 47 mg/mL (117.53 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5006 mL	12.5031 mL	25.0063 mL
	5 mM	0.5001 mL	2.5006 mL	5.0013 mL
	10 mM	0.2501 mL	1.2503 mL	2.5006 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 (6.25 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.25 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 (6.25 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.25 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 (6.25 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (6.25 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]. Devaiah BN, et al. BRD4 is an atypical kinase that phosphorylates serine2 of the RNA polymerase II carboxy-terminal domain. Proc Natl Acad Sci U S A. 2012 May 1;109(18):6927-32. [2]. Moros A, et al. Synergistic antitumor activity of lenalidomide with the BET bromodomain inhibitor CPI203 in bortezomib-resistant mantle cell lymphoma. Leukemia. 2014 Oct;28(10):2049-59

实验参考：

Animal Administration	CB17-severe combined immunodeficiency (SCID) mice are inoculated subcutaneously with 10^7 cells of the indicated MCL cell line, and monitored for tumor growth and vital parameters as previously described. For lenalidomide and lenalidomide-bortezomib dosing, mice are randomly assigned into cohorts of 3-4 mice each and receive by intraperitoneal injection a twice weekly dose of bortezomib (0.15 mg/kg), a daily dose of lenalidomide (50 mg/kg), the combination of lenalidomide and bortezomib, or an equal volume of vehicle. In the lenalidomide-CPI-203 protocol, a total of 22 REC-1 tumor-bearing mice are randomly assigned to cohorts of 5-6 mice, receiving a twice daily intraperitoneal injection of 2.5 mg/kg CPI-203, a daily intraperitoneal injection of 50 mg/kg lenalidomide, both agents or an equal volume of vehicle. Between 26 and 29 days post-inoculation, animals are killed according to institutional guidelines and tumor samples are subjected to immunohistochemical staining using primary antibodies against phospho-histone H3, cleaved caspase-3 (5A1E) and MYC (D84C12), IRF4 (M-17) and platelet endothelial cell adhesion molecule-1 (PECAM-1) (M20), CD19 (LE-CD19), Blimp-1 (clone Ros195G/G5), PAX5 (clone 24), CCL3 and CD38, as previously described. Preparations are evaluated using an Olympus DP70 microscope and Cell B Basic Imaging Software. [2]
References	[1]. Devaiah BN, et al. BRD4 is an atypical kinase that phosphorylates serine2 of the RNA polymerase II carboxy-terminal domain. Proc Natl Acad Sci U S A. 2012 May 1;109(18):6927-32. [2]. Moros A, et al. Synergistic antitumor activity of lenalidomide with the BET bromodomain inhibitor CPI203 in bortezomib-resistant mantle cell lymphoma. Leukemia. 2014 Oct;28(10):2049-59