

产品名称：**BI-7273**

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生物活性:				
Description	BI-7273 is a selective, and cell-permeable BRD9 inhibitor, with an IC <sub>50</sub> and a K <sub>d</sub> of 19 and 0.75 nM; also shows high effect on BRD7, with an IC <sub>50</sub> and a K <sub>d</sub> of 117 nM and 0.3 nM.			
IC <sub>50</sub> & Target	IC50: 19 nM (BRD9), 117 nM (BRD7)[1] Kd: 0.75 nM (BRD9), 0.3 nM (BRD7)[1]			
In Vitro	BI-7273 is a selective, and cell-permeable BRD9 inhibitor, with an IC <sub>50</sub> and a K <sub>d</sub> of 19 and 0.75 nM; also shows high effect on BRD7, with an IC <sub>50</sub> and a K <sub>d</sub> of 117 nM and 0.3 nM. BI-7273 also has slight activity against a panel of kinases such as CECR2, BRPF1, BRD1, CREBBP, EP300, FALZ, TAF1(2) and TAF1L(2), with K <sub>d</sub> s of 8.8 nM, 210 nM, 2600 nM, 8600 nM, 10000 nM, 850 nM, 1000 nM, and 1200 nM, respectively. BI-7273 (1 μM) is active in U2OS cell lines. BI-7273 blocks EOL-1 cell proliferation with EC <sub>50</sub> of 1400 nM <sup>[1]</sup> .			
Solvent&Solubility	<b>In Vitro:</b> <b>DMSO : 10 mg/mL (28.30 mM; Need ultrasonic)</b> <b>H<sub>2</sub>O : &lt; 0.1 mg/mL (insoluble)</b>			
	Preparing Stock Solutions	<div>Solvent / Mass / Concentration</div>	1 mg	5 mg
		1 mM	2.8296 mL	14.1479 mL
		5 mM	0.5659 mL	2.8296 mL
		10 mM	0.2830 mL	1.4148 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℃，6 months；-20℃，1 month。 -80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。 <b>In Vivo:</b> 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 <b>In Vitro</b> 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: ≥ 1 mg/mL (2.83 mM); Clear solution 此方案可获得 ≥ 1 mg/mL (2.83 mM, 饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 10.0 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: 1 mg/mL (2.83 mM); Suspended solution; Need ultrasonic 此方案可获得 1 mg/mL (2.83 mM)的均匀悬浊液，悬浊液可用于口服和腹腔注射。 以 1 mL 工作液为例，取 100 μL 10.0 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。			

	<p>3.请依序添加每种溶剂： 10% DMSO →90% corn oil</p> <p>Solubility: <math>\geq 1</math> mg/mL (2.83 mM); Clear solution</p> <p>此方案可获得 <math>\geq 1</math> mg/mL (2.83 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。</p> <p>以 1 mL 工作液为例, 取 100 <math>\mu</math>L 10.0 mg/mL 的澄清 DMSO 储备液加到 900 <math>\mu</math>L 玉米油中, 混合均匀。</p>
References	<p>[1]. Martin LJ, et al. Structure-Based Design of an in Vivo Active Selective BRD9 Inhibitor. J Med Chem. 2016 May 26;59(10):4462-75.</p>
实验参考:	
Cell Assay	<p>Cells are grown in 50 <math>\mu</math>L medium for 7 days starting with 500 and with 1000 cells per well of a 384 well plate in the presence of varying concentrations of compound (BI-7273, etc.) before measuring viability via cellular ATP levels using the cell titer glow assay[1].</p>
Kinase Assay	<p>His-tagged BRD9 is immobilized to a density of 2000-4000 RUs on flow cells 3 and 4 of a Biacore NTA-chip. Carbonic anhydrase II is immobilized at a similar density on flow cell 2 and a blank reference surface is generated on flow cell 1. The buffer is then switched to assay buffer (HBS-P+ = 10 mM HEPES, pH 7.4, 150 mM NaCl, 0.05 % P20 + 5 % DMSO) and the chip equilibrated for several hours before use for <math>K_d</math> determinations. To be able to correct for differences in bulk solvent refractive index caused by small variations in the DMSO concentration solvent correction samples are included at the beginning and end of the run. Compounds (BI-7273, etc.) are injected in concentration series (1:1 dilutions, 7 different concentrations), starting with a maximum concentration that is approximately 10-20-fold higher than the expected <math>K_d</math>. The concentration series are prepared in 96-well plates. In the case that the dilution window chosen for a particular compound does not appropriately bracket the <math>K_d</math> of the compound the measurement is repeated with an optimized starting concentration. Positive and negative control samples are included at regular intervals to be able to monitor the performance of the assay. CBS is used as a positive control for carbonic anhydrase II to check for integrity of the reference protein at regular intervals. To correct for the excluded volume effect a DMSO calibration series is prepared and the calibration samples are measured at the beginning and end of each run. <math>K_d</math> values are determined and averaged<sup>[1]</sup>.</p>
References	<p>[1]. Martin LJ, et al. Structure-Based Design of an in Vivo Active Selective BRD9 Inhibitor. J Med Chem. 2016 May 26;59(10):4462-75.</p>