产品名称：**MI-3**
产品别名：**Menin-MLL inhibitor 3**

| 生物活性： | | |
|---|---|---|
| **Description** | MI-3 (Menin-MLL inhibitor 3) is a potent and high affinity menin-MLL inhibitor with an IC50 of 648 nM and a Kd of 201 nM[1]. | |
| **$IC_{50}$ & Target** | IC50: 648 nM (menin-MLL); Kd: 201 nM (menin-MLL)[1] | |
| **In Vitro** | MI-3 (12.5-50 μM; HEK293 cells) treatment effectively inhibits the menin-MLL-AF9 interaction in human cells[1].<br>MI-3 (0-1.6 μM; 72 hours; KOPN-8 and MV4;11 cells) treatment shows an effective and dose-dependent growth inhibition in KOPN-8, MV4 and ME-1 cells[1].<br>MI-3 (12.5-50 μM; 48 hours; MV4;11 cells) treatment results in a substantial, and dose-dependent increase in Annexin V and AnnexinV/propidium iodide (PI) cells, demonstrating an increase in the number of cells undergoing apoptosis[1].<br>MI-3 (6.25-25 μM; 6 days; THP-1 cells) treatment results in substantially reduced expression of HOXA9 and MEIS1[1] | |
| | **Western Blot Analysis[1]** | |
| | Cell Line: | HEK293 cells |
| | Concentration: | 12.5 μM, 25 μM, 50 μM |
| | Incubation Time: | |
| | Result: | Very effectively inhibited the menin-MLL-AF9 interaction in human cells. |
| | **Cell Viability Assay[1]** | |
| | Cell Line: | KOPN-8 and MV4;11 cells |
| | Concentration: | 0 μM, 0.4 μM, 0.8 μM, 1.2 μM, 1.6 μM |
| | Incubation Time: | 72 hours |
| | Result: | Showed an effective and dose-dependent growth inhibition in KOPN-8 and MV4;11 cells. |
| | **Apoptosis Analysis[1]** | |
| | Cell Line: | MV4;11 cells |
| | Concentration: | 12.5 μM, 25 μM, 50 μM |
| | Incubation Time: | 48 hours |
| | Result: | Resulted in an increase in the number of cells undergoing apoptosis. |
| | **RT-PCR[1]** | |
| | Cell Line: | THP-1 cells |
| | Concentration: | 6.25 μM, 12.5 μM, 25 μM |
| | Incubation Time: | 6 days |
| | Result: | Resulted in substantially reduced expression of HOXA9 and MEIS1. |

***In Vitro:***

**DMSO : 8.33 mg/mL** (**22.18 mM;** Need ultrasonic)

| **Preparing Stock Solutions** | Solvent / Mass / Concentration | **1 mg** | **5 mg** | **10 mg** |
|---|---|---|---|---|
| | 1 mM | 2.6628 mL | 13.3138 mL | 26.6276 mL |
| | 5 mM | 0.5326 mL | 2.6628 mL | 5.3255 mL |

<table>
<tr><td rowspan="2">Solvent&Solubility</td><td></td><td>10 mM</td><td>0.2663 mL</td><td>1.3314 mL</td><td>2.6628 mL</td></tr>
<tr><td colspan="5">*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。<br>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。<br>In Vivo:<br>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：<br>——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<br>1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline<br>Solubility: ≥ 0.83 mg/mL (2.21 mM); Clear solution<br>此方案可获得 ≥ 0.83 mg/mL (2.21 mM，饱和度未知) 的澄清溶液。<br>以 1 mL 工作液为例，取 100 μL 8.3 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。<br><br>2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline)<br>Solubility: ≥ 0.83 mg/mL (2.21 mM); Clear solution<br>此方案可获得 ≥ 0.83 mg/mL (2.21 mM，饱和度未知) 的澄清溶液。<br>以 1 mL 工作液为例，取 100 μL 8.3 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。<br><br>3.请依序添加每种溶剂： 10% DMSO →90% corn oil<br>Solubility: ≥ 0.83 mg/mL (2.21 mM); Clear solution<br>此方案可获得 ≥ 0.83 mg/mL (2.21 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。<br>以 1 mL 工作液为例，取 100 μL 8.3 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。</td></tr>
<tr><td>References</td><td colspan="5">[1]. Grembecka J, et al. Menin-MLL inhibitors reverse oncogenic activity of MLL fusion proteins in leukemia. Nature Chemical Biology (2012), 8(3), 277-284.</td></tr>
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