# 产品名称：INCB024360
# 产品别名：IDO5L

## 生物活性：

| | | |
|---|---|---|
| **Description** | IDO5L is a potent indoleamine 2,3-dioxygenase (**IDO**) inhibitor with an **$IC_{50}$** of 67 nM. | |
| **$IC_{50}$ & Target** | IDO | IDO |
| | 67 nM ($IC_{50}$) | 19 nM ($IC_{50}$, in HeLa cell) |
| **In Vitro** | IDO5L (Compound 5l) is a potent (HeLa $IC_{50}$=19 nM) inhibitor of IDO[1]. IDO5L is one of the highest potent inhibitors of the IDO1 ($IC_{50}$=19 nM, in HeLa cell assay) [2]. | |
| **In Vivo** | Testing of IDO5L in mice demonstrates pharmacodynamic inhibition of IDO, as measured by decreased kynurenine levels (>50%) in plasma and dose dependent efficacy in mice bearing GM-CSF-secreting B16 melanoma tumors. Initial oral pharmacokinetic studies show that IDO5L is rapidly cleared ($t_{1/2}$<0.5 h) and that oral administration will not be a suitable dosing method for in vivo studies. The measured plasma exposure (2.5 μM) of IDO5L during this period exceeded our calculated mouse protein binding adjusted B16 cellular $IC_{50}$ ($PB_{adj}IC_{50}$=1.0 μM, murine cellular B16 $IC_{50}$=46 nM). Notably, kynurenine levels increase back to baseline after 4 h as IDO5L exposure levels decreased below the mouse $PB_{adj}IC_{50}$ from 1.0 to 0.1 μM[1]. | |

**Solvent&Solubility**

***In Vitro:***

**DMSO : ≥ 52 mg/mL (191.43 mM)**

* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent / Mass / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 3.6813 mL | 18.4067 mL | 36.8134 mL |
| | 5 mM | 0.7363 mL | 3.6813 mL | 7.3627 mL |
| | 10 mM | 0.3681 mL | 1.8407 mL | 3.6813 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 (9.20 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.20 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 (9.20 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.20 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。<br><br>3.请依序添加每种溶剂： 10% DMSO →90% corn oil<br>Solubility: ≥ 2.5 mg/mL (9.20 mM); Clear solution<br>此方案可获得 ≥ 2.5 mg/mL (9.20 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 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]. Yue EW, et al. Discovery of potent competitive inhibitors of indoleamine 2,3-dioxygenase with in vivo pharmacodynamic activity and efficacy in a mouse melanoma model. J Med Chem. 2009 Dec 10;52(23):7364-7.<br>[2]. Huang X, et al. Synthesis of [(18) F] 4-amino-N-(3-chloro-4-fluorophenyl)-N'-hydroxy-1,2,5-oxadiazole-3-carboximidamide (IDO5L): a novel potential PET probe for imaging of IDO1 expression. J Labelled Comp Radiopharm. 2015 Apr;58(4):156-62. |

**实验参考：**

| | |
|---|---|
| **Animal Administration** | Mice[1].<br>A single subcutaneous 100 mg/kg dose of IDO5L is administered to naive C57BL/6 mice bearing GM-CSF-secreting B16 tumors. Blood is harvested from individual mice over 8 h. Kynurenine and IDO5L concentrations are measured by LCMS. Reductions of kynurenine levels by 50-60% are observed between 2 and 4 h, with maximum inhibition seen at 2.5 h. Tumors are allowed to grow until day 7 when 14 days of subcutaneous dosing of IDO5L at 25, 50, and 75 mg/kg b.i.d. is initiated. Dose dependent inhibition of tumor growth is correlated with increasing exposures of IDO5L in plasma. |
| **References** | [1]. Yue EW, et al. Discovery of potent competitive inhibitors of indoleamine 2,3-dioxygenase with in vivo pharmacodynamic activity and efficacy in a mouse melanoma model. J Med Chem. 2009 Dec 10;52(23):7364-7.<br>[2]. Huang X, et al. Synthesis of [(18) F] 4-amino-N-(3-chloro-4-fluorophenyl)-N'-hydroxy-1,2,5-oxadiazole-3-carboximidamide (IDO5L): a novel potential PET probe for imaging of IDO1 expression. J Labelled Comp Radiopharm. 2015 Apr;58(4):156-62. |