产品名称：甲异靛
产品别名：Meisoindigo；Dian III; N-Methylisoindigotin; Natura-α

生物活性：

Description

Meisoindigo(Natura-α; N-Methylisoindigotin; Dian III), a derivative of Indigo naturalis, might induce apoptosis and myeloid differentiation of acute myeloid leukemia (AML). IC50 value: Target: apoptosis inducer in vitro: Meisoindigo inhibited the growth of leukemic cells by inducing marked apoptosis and moderate cell-cycle arrest at the G(0)/G(1) phase. It down-regulated anti-apoptotic Bcl-2, and up-regulated pro-apoptotic Bak and Bax and cell-cycle related proteins, p21and p27. Furthermore, it induced myeloid differentiation, as demonstrated by morphologic changes, up-regulation of CD11b, and increased nitroblue tetrazolium reduction activity in all cell lines tested. In addition, meisoindigo down-regulated the expression of human telomerase reverse transcriptase and enhanced the cytotoxicity of conventional chemotherapeutic agents, cytarabine and idarubicin. As with the results from cell lines, meisoindigo also induced apoptosis, up-regulated p21 and p27, and down-regulated Bcl-2 in primary AML cells [1]. meisoindigo effectively inhibits HT-29 cell proliferation (IC(50) 4.3 mmol/L), arrests HT-29 cells in G2/ M phase and induces HT-29 cell apoptosis. The downstream genes and proteins of GSK-3beta(ser(9)) expression level decrease [2]. in vivo: The in vivo anti-leukemic activity of meisoindigo was also demonstrated by decreased spleen size in a dose-dependent manner [1]. Meisoindigo significantly inhibits the HT-29 xenograft tumors growth at the dose of 100 mg/kg. The mechanism of meisoindigo activity against HT-29 cells may be related to its inhibition of glycogen synthase kinase-3beta, GSK-3beta(ser(9)) phosphorylation in Wnt signaling pathway [2].

Solvent&Solubility

In Vitro:

DMSO : ≥ 51 mg/mL (184.59 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.6194 mL	18.0969 mL	36.1939 mL
	5 mM	0.7239 mL	3.6194 mL	7.2388 mL
	10 mM	0.3619 mL	1.8097 mL	3.6194 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 (9.05 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (9.05 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。

References	[1]. Lee CC, et al. Meisoindigo is a promising agent with in vitro and in vivo activity against human acute myeloid leukemia. Leuk Lymphoma. 2010 May;51(5):897-905. [2]. Mingxin Z, et al. The antitumor activity of meisoindigo against human colorectal cancer HT-29 cells in vitro and in vivo. J Chemother. 2008 Dec;20(6):728-33.