产品说明书

26 版

基本信息

产品编号：	H10029
产品名称：	HMN-176

产品简介：

一种合成抗肿瘤化合物 HMN-214（H10028)的活性代谢物。

HMN-176 is an active metabolite of the synthetic antitumor compound HMN-214. HMN-176 shows potent cytotoxicity toward various human tumor cell lines, and in mitotic cells, it causes cell cycle arrest at M phase through the destruction of spindle polar bodies, followed by the induction of DNA fragmentation. However, no direct interactions of HMN-176 with tubulin are observed. Moreover, in animal models, it was observed that oral administration of the prodrug HMN-214 caused no significant nerve toxicity, a severe side effect often associated with microtubule binding agents such as Taxol and VCR.3 In Phase I clinical trials, HMN-214 has caused sensory neuropathy and ileus in some patients. However, the grade and frequency of these adverse effects were much lower than those of typical microtubule binding agents. As expected from the mechanism of action of HMN-214 (induction of G2-M arrest in dividing cells), the main adverse effect was neutropenia.

靶点：	PLK1

体外研究：

HMN-176 (2.5 μM) greatly increases the duration of mitosis in hTERT-RPE1 and CFPAC-1 Cell lines. The effect of HMN-176 on spindle morphology does not appear to be related to effects on microtubule polymerization. HMN-176 (2.5, 0.25, and 0.025 μM) inhibits aster formation in a concentration dependent manner. HMN-176 (0.1, 1.0, or 10.0 μg/mL) demonstrates inhibitory effects in multiple tumors, with notable activity seen in breast, nonsmall-cell lung, and ovarian cancer specimens. HMN-176 demonstrates activity towards 63% of the breast (5/8), 67% of the non-small cell lung (4/6), and 57% of the ovarian (4/7) tumor specimens treated with 10.0 μg/mL. HMN-176 shows potent cytotoxicity, with a mean IC50 value of 118 nM. HMN-176 displays similar cytotoxicity against tumors with various characteristics from different organs. Treatment with 3 μM HMN-176 suppresses the expression of MDR1 mRNA by 56%. HMN-176 has no significant effect on the residual promoter activity.

体内研究：

After p.o. of HMN-214 to male rats, the prodrug is not detected in the plasma, while plasma levels of HMN-176 peaks at 2 h and gradually decreases thereafter.

使用方法（供参考）：

一：体外实验

DMSO：溶于 DMSO(≥ 30 mg/mL)

浓度 \ 质量 / 溶液体积	1mg	5mg	10mg
1 mM	2.6149 mL	13.0743 mL	26.1486 mL

5 mM	0.5230 mL	2.6149 mL	5.2297 mL
10 mM	0.2615 mL	1.3074 mL	2.6149 mL
储备液的保存方式：-80° C, 2 years; -20° C, 1 year。			

注意事项：

1、为了您的安全和健康，请穿实验服并戴一次性手套操作。
2、以上信息仅做参考交流之用。

储存：-20℃