

产品说明书

26 版

基本信息

产品编号:	D60011
产品名称:	脱氧雪腐镰刀菌烯醇

产品简介:

是单端孢菌素家族 (trichothecenes family) 中一种具有口服活性的真菌毒素, 通过紧密连接处的细胞旁路来穿过肠粘膜。Deoxynivalenol 转运不受 P-糖蛋白 (PgP) 或多药耐药相关蛋白 (MRPs) 抑制剂的影响。

体外研究:

Deoxynivalenol (0-2 μ g/mL, 24 h) 会引发 Caco-2 细胞中丝裂原激活蛋白激酶 (MAPKs) Erk1/2、p38 和 SAPK/JNK 的磷酸化。

Deoxynivalenol (100-4000 ng/mL, 24-72 h) 在 500-4000 ng/mL 剂量下孵育 48 小时和 72 小时后, 会降低 IPEC-1 和 IPEC-J2 细胞的活力。

Deoxynivalenol (0-4000 ng/mL, 24-72 h) 在 IPEC-1 和 IPEC-J2 细胞中, 浓度为 200 ng/mL 时增加 BrdU 的掺入, 浓度为 2000-4000 ng/mL 时减少 BrdU 的掺入。

体内研究:

Deoxynivalenol (0-5 mg/kg, 灌胃, 每日一次, 14 天) 会以剂量相关的方式增加流涎过多的妊娠大鼠的数量。

Deoxynivalenol (0-5 mg/kg, 灌胃, 每日一次, 14 天) 在 5 mg/kg 剂量下会导致大鼠胎儿胸骨发育异常。

Deoxynivalenol (10-1000 mg/kg; 口服, 腹腔注射; 一次) 对 B6C3F1 小鼠的 LD50 值估计为 78 mg/kg (口服) 和 49 mg/kg (腹腔注射)。

Deoxynivalenol (2-20 mg/kg, 口服, 每日一次, 4 周) 以剂量依赖性方式增加血浆浓度, 并减少 B6C3F1 小鼠的体重增加。

药代动力学分析

Route	Dose (mg/kg)	Plasma T1/2 α (min)	Plasma T1/2 β (h)	Liver T1/2 α (min)	Liver T1/2 β (h)	Kidney T1/2 α (min)	Kidney T1/2 β (h)	Spleen T1/2 α (min)	Spleen T1/2 β (h)	Heart T1/2 α (min)	Heart T1/2 β (h)
p. o.	25	20.4	11.8	22	19	47	20.9	29	9	41	12.3

使用方法 (供参考):

一: 体外实验

溶于乙腈

浓度	质量 溶液体积	1mg	5mg	10mg
1 mM		3.3747 mL	16.8736 mL	33.7473 mL
5 mM		0.6749 mL	3.3747 mL	6.7495 mL
10 mM		0.3375 mL	1.6874 mL	3.3747 mL

储备液的保存方式: -80° C, 6 months; -20° C, 1 month.



二：体内实验

1、请依序添加每种溶剂： 10% DMSO→40% PEG300→5% Tween-80→45% Saline

Solubility: ≥ 2.5 mg/mL (8.44 mM); 澄清溶液

此方案可获得 ≥ 2.5 mg/mL (饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μ L 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μ L PEG300 中，混合均匀；再向上述体系中加入 50 μ L Tween-80，混合均匀；然后再继续加入 450 μ L 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 (8.44 mM); 澄清溶液

此方案可获得 ≥ 2.5 mg/mL (饱和度未知) 的澄清溶液。

以 1 mL 工作液为例，取 100 μ L 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μ L 20% 的 SBE- β -CD 生理盐水水溶液 中，混合均匀。

2 g SBE- β -CD (磺丁基醚 β -环糊精) 粉末定容于 10 mL 的生理盐水中，完全溶解至澄清透明。

注：工作液建议您现用现配，当天使用。

<1mg/ml 表示微溶或不溶。

普西唐提供的所有化合物浓度为内部测试所得，实际溶液度可能与公布值有所偏差，属于正常的批间细微差异现象。

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。

三、细胞实验

Cell Proliferation Assay

Cell Line: Caco-2 cells

Concentration: 0-10 μ g/mL

Incubation Time: 48 h

Result: Inhibited the proliferation of cells in a dose-dependent manner.

Cell Cycle Analysis

Cell Line: IPEC-1 and IPEC-J2 cells

Concentration: 200-2000 ng/mL

Incubation Time: 24-72 h

Result: Increased percentages of pre-G1, S and G2/M phases and decreased of the G0/G1 phase in response to 2000 ng/mL after 48 h in IPEC-1 cells.
Decreased the G0/G1 phase in IPEC-J2 cell at the doses of 2000 ng/mL after 48 h.
Increased the percentage of pre-G1 in IPEC-1 cells after 72 h.
Increased the G2/M phase in IPEC-1 and IPEC-J2 cells at the doses of 2000 ng/mL after 72 h.

Apoptosis Analysis

Cell Line: IPEC-1 and IPEC-J2 cells

Concentration: 200-2000 ng/mL

Incubation Time: 6-72 h

Result: Increased the caspase 3 activity after 6 h, 8 h, 48 h and 72 h of incubation with 2000 ng/mL.
Reduced the caspase 3 activity to the control level after 24 h of incubation with 2000 ng/mL.



Western Blot Analysis	
Cell Line:	Caco-2 cells
Concentration:	2 μg/mL
Incubation Time:	5-240 min
Result:	Increased the phosphorylation of Erk1/Erk2 during 5 min. Increased the phosphorylation of p38 from 5 to 30 min.
Western Blot Analysis	
Cell Line:	IPEC-1 and IPEC-J2 cells
Concentration:	200-2000 ng/mL
Incubation Time:	48 h
Result:	Reduced the protein level of ZO-1 at the doses of 2000 ng/mL.
四、动物实验	
Animal Model:	Pregnant rats
Dosage:	0-5 mg/kg
Administration:	i. g., daily, 14 days
Result:	Reduced feed consumption and mean body weight gain in the 5 mg/kg group . Reduced feed consumption in the 2.5 mg/kg group during 8-14 days. Decreased the number of viable fetuses at 5 mg/kg. Reduced fetal body weight and crown-rump length at 2.5 and 5 mg/kg. Increased the incidence of runts and the average number of fetuses per litter with internal anomalies at 2.5 and 5 mg/kg. Increased the incidence of misaligned and fused sternbrae at 5 mg/kg. Increased the ratios of liver-to-body-weight and kidneys-to-body-weight.

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: 2-8℃
