

产品名称：比沙可啶
产品别名：**Bisacodyl**

生物活性：

Description

Bisacodyl is a stimulant laxative drug that works directly on the colon to produce a bowel movement. Target: Others Bisacodyl is an organic compound that is used as a stimulant laxative drug. Bisacodyl (20 mg/kg) results in a decrease in AQP3 protein expression and increased mRNA expression level of TNF- α in the colon of rats [1]. Bisacodyl inhibits water absorption in rat jejunum, ileum, and colon, the degree of inhibition is linearly related to the logarithm of the bisacodyl concentration over the range of 0.05 mg to 2.0 mg per 100 mL [2]. Bisacodyl (10 mg/kg, intragastrically) induces a significant decrease in jejunal NOS activity in rats. Bisacodyl (10 mg/kg, intragastrically) increases the distance traveled by the marker in all time periods [3]. Bisacodyl (5.9 mg/kg) decreases significantly jejunal and colonic (Na + K) ATPase activity as compared to saline-treated rats. Bisacodyl (5.9 mg/kg) increases significantly jejunal and colonic PGE2 content and stimulates jejunal and colonic adenyl cyclase activity as compared to those in control rats without affecting cAMP content [4]. Bisacodyl (4.3 mg/kg) coupled with AOM increases the number of crypt per focus, but not the number of tumors in rats. Bisacodyl (43 mg/kg) significantly increases the number of crypt per focus and tumors in rats [5].

Solvent&Solubility

In Vitro:

DMSO : 50 mg/mL (138.35 mM; Need ultrasonic)

H₂O : < 0.1 mg/mL (insoluble)

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing	1 mM		2.7671 mL	13.8355 mL	27.6709 mL
Stock Solutions	5 mM		0.5534 mL	2.7671 mL	5.5342 mL
	10 mM		0.2767 mL	1.3835 mL	2.7671 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℃，6 months；-20℃，1 month。-80℃ 储存时，请在 6 个月内使用，-20℃ 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 (6.92 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.92 mM，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；向上述体系中加入 50 μ L Tween-80，混合均匀；然后继续加入 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 (6.92 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (6.92 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。 3.请依序添加每种溶剂： 10% DMSO $\rightarrow$90% corn oil Solubility: $\geq$ 2.5 mg/mL (6.92 mM); Clear solution 此方案可获得 $\geq$ 2.5 mg/mL (6.92 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。 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]. Ikarashi, N., et al., <u>The laxative effect of bisacodyl is attributable to decreased aquaporin-3 expression in the colon induced by increased PGE2 secretion from macrophages.</u> <i>Am J Physiol Gastrointest Liver Physiol</i>, 2011. 301(5): p. G887-95. [2]. Saunders, D.R., et al., <u>Effect of bisacodyl on the structure and function of rodent and human intestine.</u> <i>Gastroenterology</i>, 1977. 72(5 Pt 1): p. 849-56. [3]. Karmeli, F., R. Stalnikowicz, and D. Rachmilewitz, <u>Effect of colchicine and bisacodyl on rat intestinal transit and nitric oxide synthase activity.</u> <i>Scand J Gastroenterol</i>, 1997. 32(8): p. 791-6. [4]. Rachmilewitz, D., F. Karmeli, and E. Okon, <u>Effects of bisacodyl on cAMP and prostaglandin E2 contents, (Na + K) ATPase, adenylyl cyclase, and phosphodiesterase activities of rat intestine.</u> <i>Dig Dis Sci</i>, 1980. 25(8): p. 602-8. [5]. Borrelli, F., et al., <u>Effect of bisacodyl and cascara on growth of aberrant crypt foci and malignant tumors in the rat colon.</u> <i>Life Sci</i>, 2001. 69(16): p. 1871-7.

源叶生物