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产品名称：马洛替酯
产品别名：Malotilate

生物活性：

Description

Malotilate is a liver protein metabolism improved compound, which selectively inhibit the 5-lipoxygenase. IC50 Value: Target: 5-lipoxygenase in vitro: In an in vitro invasion assay using rat lung endothelial (RLE) cells, invasion of tumor cells which had been treated with MT (10 ng/ml, 24 h) was not affected; however, when RLE cells had been treated with MT, invasion was significantly inhibited in three cell lines (SAS, Ca9-22 and HSC-4) and a tendency to inhibition was also observed in other cell lines [1]. in vivo: The improvement rates for choline esterase activity were significantly greater in the malotilate group than in the control group. Serum albumin levels significantly increased in the malotilate group but not in the control group [2]. In the rats treated with MT for 19 days after i.v. inoculation of c-SST-2 cells, lung metastasis was also significantly suppressed [3]. Malotilate prevented increases in serum markers of type III and IV collagen synthesis as well as accumulation of the collagens, laminin and fibronectin in the liver [4]. Toxicity: Malotilate cytotoxicity to PBMCs, assessed by trypan blue dye exclusion and lactate dehydrogenase (LDH) release into the culture media, was found to be markedly increased by the addition of the NADPH generating system, indicating that metabolites play a significant role in toxicity [5].

Solvent&Solubility

In Vitro:

DMSO : ≥ 100 mg/mL (346.76 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.4676 mL	17.3382 mL	34.6765 mL
	5 mM	0.6935 mL	3.4676 mL	6.9353 mL
	10 mM	0.3468 mL	1.7338 mL	3.4676 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 (8.67 mM); Clear solution

此方案可获得 ≥ 2.5 mg/mL (8.67 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 (8.67 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.67 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 →90% corn oil Solubility: ≥ 2.5 mg/mL (8.67 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (8.67 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]. Shibata T, et al. Inhibitory effects of malotilate on in vitro invasion of lung endothelial cell monolayer by human oral squamous cell carcinoma cells. Tumour Biol. 2000 Sep-Oct;21(5):299-308. [2]. Takase S, et al. Effects of malotilate treatment on alcoholic liver disease. Alcohol. 1989 May-Jun;6(3):219-22. [3]. Nagayasu H, et al. Inhibitory effects of malotilate on invasion and metastasis of rat mammary carcinoma cells by modifying the functions of vascular endothelial cells. Br J Cancer. 1998 May;77(9):1371-7. [4]. Ryhanen L, et al. The effect of malotilate on type III and type IV collagen, laminin and fibronectin metabolism in dimethylnitrosamine-induced liver fibrosis in the rat. J Hepatol. 1996 Feb;24(2):238-45. [5]. Nomura F, et al. Detection of malotilate toxicity in vitro with peripheral blood mononuclear cells as targets. A preliminary report. J Hepatol. 1990 Jul;11(1):65-9.