产品名称：丹酚酸 B
产品别名：Salvianolic acid B；Lithospermic acid B

生物活性：

Description

Salvianolic acid B is an active ingredient of Salvia miltiorrhiza, which has been widely applied in China for the management of various microcirculation-related disorders, such as cardiovascular disease, cerebrovascular disease, and diabetic vascular complication. IC50 value: Target: In vitro: Salvianolic acid B (SA-B) 1 and 10 micromol/L decrease the cell active TGF-beta1 secretion by 63.3 % and 15.6 % of the control, down-regulat pro-collgen alpha1(I) mRNA expression to 77.0% and 51.8% respectively (P<0.05). SA-B 1 and 10 micromol/L also inhibit MAPK activity by 1 to 2 fold respectively [3]. In vivo: Salvianolic acid B (SalB) (5 mg · kg-1 · h-1) significantly attenuates LPS-induced pulmonary microcirculatory disturbance, including the increase in leukocyte adhesion and albumin leakage. In addition, LPS increases pulmonary tissue wet-to-dry weight ratio and tumor necrosis factor [alpha] and interleukin 8 levels in plasma and bronchoalveolar lavage fluid enhances the expression of E-selectin, intercellular adhesion molecule 1, myeloperoxidase, MMP-2, and MMP-9, whereas it decreases the expression of AQP-1 and AQP-5 in pulmonary tissue, all of which are attenuated by SalB pretreatment[1]. SalB administration (10 mg/kg) significantly ameliorate the Aβ25-35 peptide-induced memory impairment in the passive avoidance task (P<0.05). SalB treatment also reduced the number of activated microglia and astrocytes that are observed during the inflammatory reaction after the administration of the Aβ25-35 peptide. Moreover, SalB markedly reduce inducible nitric oxide synthase and cyclooxygenase-2 expression levels and thiobarbituric acid reactive substances, which are increased by the administration of the Aβ25-35 peptide. Furthermore, SalB administration significantly rescue the Aβ25-35 peptide-induced decrease of choline acetyltransferase and brain-derived neurotrophic factor protein levels[2].

Solvent&Solubility

In Vitro:

H_2O : 50 mg/mL (**69.58 mM;** ultrasonic and adjust pH to 3 with HCl)

H_2O : ≥ 45 mg/mL (**62.62 mM**)

DMSO : 25 mg/mL (**34.79 mM;** Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	1.3916 mL	6.9579 mL	13.9158 mL
	5 mM	0.2783 mL	1.3916 mL	2.7832 mL
	10 mM	0.1392 mL	0.6958 mL	1.3916 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；该产品在溶液状态不稳定，建议您现用现配，即刻使用。

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: ≥ 2.08 mg/mL (2.89 mM); Clear solution

此方案可获得 ≥ 2.08 mg/mL (2.89 mM，饱和度未知) 的澄清溶液。

	以 1 mL 工作液为例，取 100 μL 20.8 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: ≥ 2.08 mg/mL (2.89 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (2.89 mM，饱和度未知) 的澄清溶液。 以 1 mL 工作液为例，取 100 μL 20.8 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: ≥ 2.08 mg/mL (2.89 mM); Clear solution 此方案可获得 ≥ 2.08 mg/mL (2.89 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 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Lee YW, et al.Neuroprotective effects of salvianolic acid B on an Aβ25-35 peptide-induced mouse model of Alzheimer's disease. Eur J Pharmacol. 2013 Mar 15;704(1-3):70-7. [2]. Liu P, et al. Effect of salvianolic acid B on collagen production and mitogen-activated protein kinase activity in rat hepatic stellate cells. Acta Pharmacol Sin. 2002 Aug;23(8):733-8. [3]. Lin, Fang, et al. Salvianolic acid B protects from pulmonary microcirculation disturbance induced by lipopolysaccharide in rat. Shock. 2013 Mar;39(3):317-25.