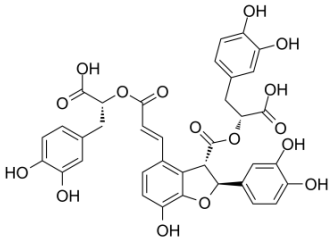
Salvianolic acid B

Cat. No.:	HY-N1362
CAS No.:	121521-90-2
Molecular Formula:	$C_{36}H_{30}O_{16}$
Molecular Weight:	718.61
Target:	Autophagy
Pathway:	Autophagy
Storage:	Powder -20°C 3 years 4°C 2 years

* The compound is unstable in solutions, freshly prepared is recommended.



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

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 2.08 mg/mL (2.89 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 2.08 mg/mL (2.89 mM); Clear solution
3. Add each solvent one by one: **10% DMSO >> 90% corn oil**
   Solubility: ≥ 2.08 mg/mL (2.89 mM); Clear solution

BIOLOGICAL ACTIVITY

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].

CUSTOMER VALIDATION

- **Phytomedicine**. 2019 May;58:152754.

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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.

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