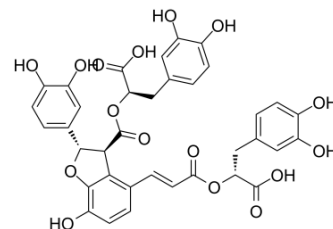


## Salvianolic acid B

Cat. No.:	HY-N1362		
CAS No.:	121521-90-2		
Molecular Formula:	C <sub>36</sub> H <sub>30</sub> O <sub>16</sub>		
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<sub>2</sub>O : 50 mg/mL (69.58 mM; ultrasonic and adjust pH to 3 with HCl)

H<sub>2</sub>O : ≥ 45 mg/mL (62.62 mM)

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

\* "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	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-regulate pro-collagen 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) ( $5 \text{ mg} \cdot \text{kg}^{-1} \cdot \text{h}^{-1}$ ) 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 A $\beta$ 25-35 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 A $\beta$ 25-35 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 A $\beta$ 25-35 peptide. Furthermore, SalB administration significantly rescue the A $\beta$ 25-35 peptide-induced decrease of choline acetyltransferase and brain-derived neurotrophic factor protein levels[2].

## CUSTOMER VALIDATION

- Oxid Med Cell Longev. 2020 Jul.
- Phytomedicine. 2019 May;58:152754.
- BiochemBiophys Res Commun. 2020 Apr 4. pii: S0006-291X(20)30615-X.

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## REFERENCES

- [1]. Lee YW, et al. Neuroprotective effects of salvianolic acid B on an A $\beta$ 25-35 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.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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