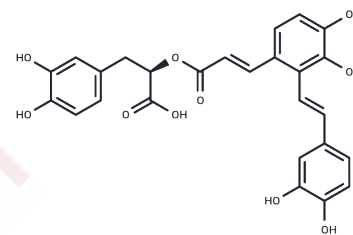


## Salvianolic acid A

## Chemical Properties

CAS No. :	96574-01-5
Formula:	C <sub>26</sub> H <sub>22</sub> O <sub>10</sub>
Molecular Weight:	494.45
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years   In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



## Biological Description

Description	Salvianolic acid A (Dan Phenolic Acid A) is a natural product and an inhibitor of matrix metalloproteinase 9 (MMP-9). Salvianolic acid A has antioxidant and anti-inflammatory activity and protects the blood-brain barrier.
Targets(IC50)	MMP
In vitro	<p><b>METHODS:</b> Five tumor cell lines, SKOV3, HeLa, NCI-H1975, DU145 and A549, were treated with Salvianolic acid A (1.56-100 μM) for 72 h. Cell viability was measured by CellTiter-Glo kit.</p> <p><b>RESULTS:</b> The growth of SKOV3, HeLa, NCI-H1975, DU145 and A549 cells was inhibited with increasing concentrations of Salvianolic acid A, with IC50s of 30.84 μM, 15.85 μM, 10.19 μM, 9.512 μM and 6.461 μM, respectively. [1]</p> <p><b>METHODS:</b> Rat cardiomyocytes H9C2 were treated with Salvianolic acid A (50 μM) and Doxorubicin (4 μM) for 12 h. Apoptosis was detected by TUNEL assay.</p> <p><b>RESULTS:</b> The number of apoptotic cells increased significantly after Dox stimulation. H9C2 cells co-treated with Dox and Salvianolic acid A exhibited significantly lower apoptosis rates compared to cells exposed to Dox. Salvianolic acid A inhibited Dox-induced apoptosis in H9C2 cells. [2]</p>
In vivo	<p><b>METHODS:</b> In order to investigate the effects on amnesia in mice, Salvianolic acid A (10-40 mg/kg) was administered orally once daily for five days to a C57BL/6 mouse model of amnesia induced by diazepam.</p> <p><b>RESULTS:</b> Salvianolic acid A exerts an anti-amnesic effect on diazepam-induced paracrine amnesia in mice by enhancing the antioxidant capacity of the hippocampus. [3]</p>

## Solubility Information

Solubility	DMSO: 85 mg/mL (171.91 mM), Sonication is recommended. Ethanol: 10 mg/mL (20.22 mM), Sonication is recommended. ( $< 1$ mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 13 mg/mL (26.29 mM), Solution. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may</i>

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In vivo Formulation	<i>vary and should be modified based on specific experimental conditions.</i>
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### Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0224 mL	10.1122 mL	20.2245 mL
5 mM	0.4045 mL	2.0224 mL	4.0449 mL
10 mM	0.2022 mL	1.0112 mL	2.0224 mL
50 mM	0.0404 mL	0.2022 mL	0.4045 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Zhang Q, et al. Salvianolic Acid A, as a Novel ETA Receptor Antagonist, Shows Inhibitory Effects on Tumor in Vitro. *Int J Mol Sci.* 2016 Aug 2;17(8):1244.

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Huang B, Lin B, Zheng H, et al. Discovery of natural products as influenza neuraminidase inhibitors: in silico screening, in vitro validation, and molecular dynamic simulation studies. *Molecular Diversity.* 2025: 1-17.

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