

## Sesamin

## Chemical Properties

CAS No. :	607-80-7
Formula:	C <sub>20</sub> H <sub>18</sub> O <sub>6</sub>
Molecular Weight:	354.35
Storage:	Store at low temperature Powder: -20°C for 3 years   In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>

## Biological Description

Description	Sesamin is a selective delta 5 desaturase inhibitor in the biosynthesis of polyunsaturated fatty acids and is a lignan abundantly present in sesame oil. It has potent neuroprotective effects against cerebral ischemia.
Targets(IC50)	Others, Stearoyl-CoA Desaturase (SCD)
In vitro	In mice, the LD50 of orally administered sesamin is 3800 mg/kg; in rats, the LD50 is 6150 mg/kg.
In vivo	Sesamin significantly enhances the activity of liver enzymes involved in fatty acid oxidation, such as Acyl-CoA dehydrogenase, Acyl-CoA oxidase, 3-Hydroxyacyl-CoA dehydrogenase, Enoyl-CoA hydratase, and 3-Ketoacyl-CoA thiolase, as well as the activities of 2,4-Dienoyl-CoA reductase and $\Delta^3, \Delta^2$ -Enoyl-CoA isomerase.

## Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 103 mg/mL (290.67 mM), Sonication is recommended. H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (11.29 mM), Sonication is recommended. <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 vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.8221 mL	14.1103 mL	28.2207 mL
5 mM	0.5644 mL	2.8221 mL	5.6441 mL
10 mM	0.2822 mL	1.411 mL	2.8221 mL
50 mM	0.0564 mL	0.2822 mL	0.5644 mL

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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

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Lim YP, et al. *Evid Based Complement Alternat Med*, 2012, 2012, 242810.

Dubey NK, et al. *Plant Pathology in the 21st Century*, 2009, 1, 181-198.

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