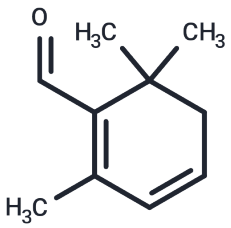
# Data Sheet (Cat.No.TN2423)

TargetMol

## Safranal

### Chemical Properties



CAS No. : 116-26-7

Formula: C10H14O

Molecular Weight: 150.22

Storage: Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Safranal is the special volatile aroma compound of saffron.Safranal has neuroprotective and anti-inflammatory effects and has the potential for Parkinson's disease research. |
| Targets(IC50) | Antioxidant,Nrf2 |
| In vitro | At first, the potential toxic effect of safranal on OLN-93 viability was evaluated. Also, the cells were pretreated with safranal (0.1, 1, 10, 50, 100 and 200 μM) for 2 h and then subjected to glutamic acid (16 mM) or quinolinic acid (8 mM) toxicity for 24 h, in which the same treatments were applied. Results: Safranal at concentration ranges of 1-800 μM had no toxic effect on cell viability ($p>0.05$). Treatment with safranal significantly increased cell viability following glutamic acid or quinolinic acid insults at concentrations higher than 1 μM ($p<0.01$). The cytoprotective potential of safranal was also accompanied by decreased ROS accumulation ($p<0.001$) and malondialdehyde level ($p<0.001$) following glutamic acid or quinolinic acid insults. The data suggests that safranal exhibits oligoprotection potential by means of inhibiting oxidative stress parameters. |
| In vivo | Safranal (200-500 mg/kg; PO; for 7 days) slightly restores colon length and reduces weight loss percentage, significantly lowering the DAI score[2]. |

### Solubility Information

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|---|---|
| Solubility | DMSO: 250 mg/mL (1664.23 mM),Sonication is recommended.<br>Ethanol: 100 mg/mL (665.69 mM),Sonication is recommended.<br>(< 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 (26.63 mM),Sonication is recommended.<br>*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.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 6.6569 mL | 33.2845 mL | 66.569 mL |
| 5 mM | 1.3314 mL | 6.6569 mL | 13.3138 mL |
| 10 mM | 0.6657 mL | 3.3285 mL | 6.6569 mL |
| 50 mM | 0.1331 mL | 0.6657 mL | 1.3314 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

Safranal Attenuates Excitotoxin-Induced Oxidative OLN-93 Cells Injury
Peeraphong Lertnimitphun, et al. Safranal Alleviates Dextran Sulfate Sodium-Induced Colitis and Suppresses Macrophage-Mediated Inflammation. Front Pharmacol. 2019 Nov 1;10:1281.