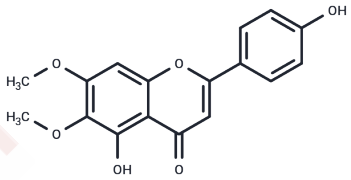
# Data Sheet (Cat.No.TQ0119)

TargetMol

## Cirsimaritin

### Chemical Properties



CAS No. : 6601-62-3

Formula: C17H14O6

Molecular Weight: 314.29

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

### Biological Description

| | |
|---|---|
| Description | Cirsimaritin exhibits antibacterial, anti-inflammation, anti-tumor, antioxidant properties and renal protection. Cirsimaritin binds weakly to the benzodiazepine site on GABAA receptors. |
| Targets(IC50) | GABA Receptor |
| In vitro | Cirsimaritin inhibits the growth of tumor cells and induced mitochondrial apoptosis in human gallbladder carcinoma cell line (GBC-SD), it triggers endoplasmic reticulum (ER) stress and down-regulates the phosphorylation of Akt [1]. Cirsimaritin increases tyrosinase activity and melanin content in murine B16F10 melanoma cells by activation of CREB as well as upregulation of MITF and tyrosinase expression in a dose-dependent manner [2]. |
| In vivo | Cirsimaritin significantly reduces anxiety in mice. The high-affinity benzodiazepine binding site is not involved in the anxiolytic activity induced by these compounds. Cirsimaritin does not decrease by co-administration of flumazenil (2.5 mg/kg) with salvigenin, rosmanol and cirsimaritin (10 mg/kg)[3]. |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 26.67 mg/mL (84.86 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: 2.67 mg/mL (8.5 mM),Solution.<br>10% DMSO+90% Saline: < 2.67 mg/mL (8.5 mM),Lower concentrations may be soluble, but exact solubility limit is unknown.<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 | 3.1818 mL | 15.9089 mL | 31.8177 mL |
| 5 mM | 0.6364 mL | 3.1818 mL | 6.3635 mL |
| 10 mM | 0.3182 mL | 1.5909 mL | 3.1818 mL |
| 50 mM | 0.0636 mL | 0.3182 mL | 0.6364 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

Quan Z, et al. Reactive oxygen species-mediated endoplasmic reticulum stress and mitochondrial dysfunction contribute to cirsimaritin-induced apoptosis in human gallbladder carcinoma GBC-SD cells. Cancer Lett. 2010 Sep 28;295(2):252-9.
Kim HJ, et al. Melanogenesis-inducing effect of cirsimaritin through increases in microphthalmia-associated transcription factor and tyrosinase expression. Int J Mol Sci. 2015 Apr 20;16(4):8772-88.
Abdelhalim A, et al. Antidepressant, Anxiolytic and Antinociceptive Activities of Constituents from Rosmarinus Officinalis. J Pharm Pharm Sci. 2015;18(4):448-59.