# Data Sheet (Cat.No.TQ0260)

TargetMol

## Cerulenin

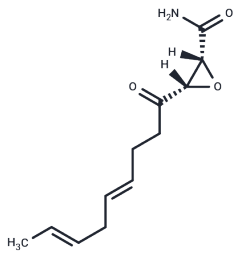
### Chemical Properties

CAS No. : 17397-89-6

Formula: C12H17NO3

Molecular Weight: 223.27

Storage: Store at low temperature,Store under nitrogen,Keep away from direct sunlight,Keep away from moisture
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 | Cerulenin is a natural inhibitor of fatty acid synthase (FAS). It is produced by the fungus Cephalosporium caeruleus. |
| Targets(IC50) | Apoptosis,Antibiotic,Antifungal,Fatty Acid Synthase |
| In vitro | Cerulenin had a similar effect as StAR overexpression.StAR attenuated lipid synthesis and uptake as well as PA-induced inflammation and reduction in NO bioavailability in aortic endothelial cells. StAR can ameliorate endothelial dysfunction induced by PA via reducing the intracellular lipid levels[1]. |
| In vivo | The histological profile of ob/ob livers that received cerulenin treatment demonstrated a dramatic reduction in lipid content, which was dose and time dependent. Seven-day treatment of 60 mg/kg cerulenin daily or every other day demonstrated the greatest decrease of fat staining and in some areas of the liver, ORO staining was absent ( Fig. 3D-F ). Two-day treatment of 60 mg/kg cerulenin resulted in a modest reduction in fat content. In contrast, cerulenin given 30 mg/kg was less effective than 60 mg/kg doses, but its effect on fat content was still obvious except for 2-day treatment (data not shown)[2]. |

### Solubility Information

| | |
|---|---|
| Solubility | Ethanol: Soluble<br>DMSO: 90 mg/mL (403.1 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: 3.3 mg/mL (14.78 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 | 4.4789 mL | 22.3944 mL | 44.7888 mL |
| 5 mM | 0.8958 mL | 4.4789 mL | 8.9578 mL |
| 10 mM | 0.4479 mL | 2.2394 mL | 4.4789 mL |
| 50 mM | 0.0896 mL | 0.4479 mL | 0.8958 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

Tian D, et al. Overexpression of steroidogenic acute regulatory protein in rat aortic endothelial cells attenuates palmitic acid-induced inflammation and reduction in nitric oxide bioavailability. Cardiovasc Diabetol. 2012 Nov 21; 11:144.

Gang, Cheng, Arun, et al. Cerulenin Blockade of Fatty Acid Synthase Reverses Hepatic Steatosis in ob/ob Mice[J]. Plos One, 2013.

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