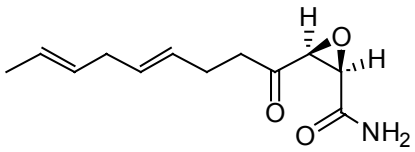
bioaustralis
fine chemicals

PRODUCT DATA SHEET

Cerulenin

Code: **BIA-C1218**

Pack sizes: **5 mg, 25 mg**



Synonyms : **Helicocerin, NSC 116069, 2,3-Epoxy-4-oxo-7,10-dodecadienamide**

Specifications

CAS #	:	**17397-89-6**
Molecular Formula	:	**$C_{12}H_{17}NO_3$**
Molecular Weight	:	**223.3**
Source	:	***Cephalosporium caerulens***
Appearance	:	**Off-white powder**
Purity	:	**> 98%**
Long Term Storage	:	**- 20°C**
Solubility	:	**Soluble in DMSO, methanol or ethanol. Slightly soluble in water.**

Application Notes

Cerulenin is an epoxy fatty acid amide isolated from the fungus *Cephalosporium caerulens* and identified as an antifungal in the 1960s. Over the past 40 years cerulenin has found broad application in lipid biochemistry as an inhibitor fatty acid and sterol biosynthesis. Cerulenin binds to β-keto-acyl-ACP synthase blocking the interaction of malonyl CoA. Cerulenin is also an inhibitor of bacterial fatty acid synthesis acting on the FabH, FabB and FabF condensation enzymes. Cerulenin stimulates fatty acid oxidation and inhibits HMG-CoA synthetase activity.

References

1. Studies on cerulenin, III. Isolation and physico-chemical properties of cerulenin. Sano Y. et al., J. Antibiot. 1967, 200, 344.
2. Preparation of 13C and 3H-labelled cerulenin and biosynthesis with 13C NMR. Awaya J., J. Antibiot. 1975, 28, 824.
3. The antibiotic cerulenin, a novel tool for biochemistry as an inhibitor of fatty acid synthesis. Omura S., Bact. Rev. 1976, 40, 681.
4. Inhibition of the phosphatidylinositol 3-kinase/Akt pathway sensitizes MDA-MB468 human breast cancer cells to cerulenin-induced apoptosis. Liu X. et al., Mol Cancer Ther. 2006, 5, 494.

Building C, 28-54 Percival Road, Smithfield NSW 2164, AUSTRALIA
Tel: 61 2 9757 4515 Fax: 61 2 9757 2586 Web: www.bioaustralis.com Email: info@bioaustralis.com