

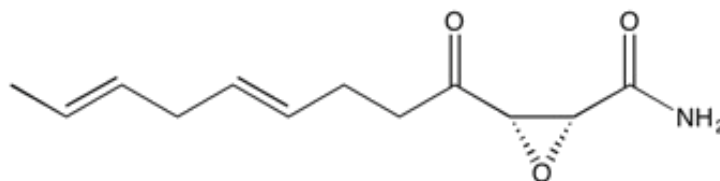
Catalog # 10-2062

Cerulenin

17397-89-6

2,3-Epoxy-4-oxo-7,10-dodecadienamide

Lot # X101410



Fatty acid synthase (FAS) inhibitor. Binds to β -keto-acyl-ACP synthase (KAS; $IC_{50}=1.5 \mu M$), thus inhibiting protein acylation at concentrations of 45-134 μM ¹. Produces metabolic effects similar to the effects of leptin, but through mechanisms that are independent of, or down-stream of, both leptin and melanocortin receptors². Reduces nutrient-induced insulin release from normal rat islets³. Induces apoptosis in human melanoma A-375 cells⁴.

- 1) Yasuno *et al.* (2004), *Identification and molecular characterization of the beta-ketoacyl-[acyl carrier protein] synthase component of the Arabidopsis mitochondrial fatty acid synthase*; J. Biol. Chem., **279** 8242
- 2) Makimura *et al.* (2001), *Cerulenin mimics effects of leptin on metabolic rate, food intake, and body weight independent of the melanocortin system, but unlike leptin, cerulenin fails to block neuroendocrine effects of fasting*; Diabetes, **50** 733
- 3) Metz *et al.* (1993), *Modulation of insulin secretion from normal rat islets by inhibitors of the post-translational modifications of GTP-binding proteins*; Biochem. J., **295** 31
- 4) Ho *et al.* (2007), *Fatty acid synthase inhibitors cerulenin and C75 retard growth and induce caspase-dependent apoptosis in human melanoma A-375 cells*; Biomed. Pharmacother., **61** 578

PHYSICAL DATA

Molecular Weight:	223.27
Molecular Formula:	C ₁₂ H ₁₇ NO ₃
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 10 mg/ml) or Ethanol (up to 10 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month.

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