

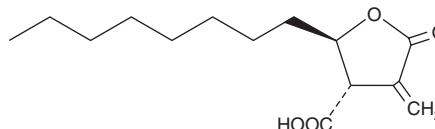
PRODUCT INFORMATION



(±)-C75

Item No. 10005270

CAS Registry No.: 191282-48-1
Formal Name: tetrahydro-4-methylene-2R-octyl-5-oxo-3S-furancarboxylic acid
MF: C₁₄H₂₂O₄
FW: 254.3
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

(±)-C75 is supplied as a crystalline solid. A stock solution may be made by dissolving the (±)-C75 in an organic solvent purged with an inert gas. (±)-C75 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of (±)-C75 in ethanol and DMF is 30 mg/ml and 10 mg/ml in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of (±)-C75 can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of (±)-C75 in PBS (pH 7.2) is at least 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Inhibition of fatty acid synthase (FASN) by the irreversible inhibitor cerulenin leads to cytotoxicity and apoptosis in human cancer cell lines.¹ (±)-C75 is a more stable inhibitor of FASN than cerulenin that leads to profound weight loss and feeding inhibition in both high-fat diet wild type obese and leptin-deficient *ob/ob* mice.² (±)-C75 is also cytotoxic to many human cancer cell lines, an effect believed to be mediated by the accumulation of malonyl-coenzyme A in cells with an upregulated FASN pathway.³

References

1. Moche, M., Schneider, G., Edwards, P., *et al.* Structure of the complex between the antibiotic cerulenin and its target, β -ketoacyl-acyl carrier protein synthase. *J. Biol. Chem.* **274**(10), 6031-6034 (1999).
2. Loftus, T.M., Jaworsky, D.E., Frehywot, G.L., *et al.* Reduced food intake and body weight in mice treated with fatty acid synthase inhibitors. *Science* **288**, 2379-2381 (2000).
3. Pizer, E.S., Thupari, J., Han, W.F., *et al.* Malonyl-coenzyme-A is a potential mediator of cytotoxicity induced by fatty-acid synthase inhibition in human breast cancer cells and xenografts. *Cancer Res.* **60**, 213-218 (2000).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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