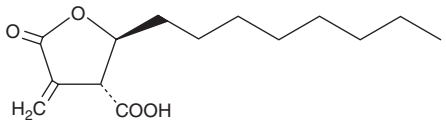
PRODUCT INFORMATION

(-)-*trans*-C75

Item No. 9000784

CAS Registry No.: 1234694-22-4
Formal Name: tetrahydro-4-methylene-2S-octyl-5-oxo-3R-furancarboxylic acid
Synonym: (2S,3R)-C75
MF: $C_{14}H_{22}O_4$
FW: 254.3
Purity: ≥97%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

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

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 (-)-*trans*-C75 can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of (-)-*trans*-C75 in PBS, pH 7.2, is approximately 0.5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

C75 is stable fatty acid synthase (FASN) inhibitor that when administered in racemic form leads to profound weight loss and feeding inhibition in both high-fat diet wild type obese and leptin-deficient *ob/ob* mice.[1] 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.[2] (-)-*trans*-C75 is an enantiomer of C75.[3] Its biologicial activity has not been reported.

References

1. 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(5475)**, 2379-2381 (2000).
2. 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(2)**, 213-218 (2000).
3. Chakrabarty, K., Forzato, C., Nitti, P., *et al*. The first kinetic enzymatic resolution of methyl ester of C75. *Lett. Org. Chem.***7(3)**, 245-248 (2010).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM