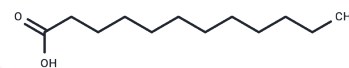


## Lauric Acid

## Chemical Properties

|                   |   |
|-------------------|---|
| CAS No. :         | 143-07-7  |
| Formula:          | C <sub>12</sub> H <sub>24</sub> O <sub>2</sub>  |
| Molecular Weight: | 200.32  |
| Storage:          | Powder: -20°C for 3 years   In solvent: -80°C for 1 year<br>Actual storage temperature shall be subject to the COA. |



## Biological Description

|               |   |
|---------------|---|
| Description   | Lauric Acid (Dodecylic acid), which is found naturally in various plant and animal fats and oils, is a saturated medium-chain fatty acid with a 12-carbon backbone. It is a major component of coconut oil and palm kernel oil.   |
| Targets(IC50) | Endogenous Metabolite, Antibacterial  |
| In vitro      | Lauric acid induces apoptosis in Caco-2 (p<0.05) and IEC-6 cells (p<0.05). In Caco-2 cells, lauric acid reduces GSH availability and generated ROS compared to butyrate (p < 0.05). Lauric acid reduces Caco-2 and IEC-6 cells in G0/G1 and arrested cells in the S and G2/M phases. Lauric acid induces apoptosis in IEC-6 cells compared to butyrate (p < 0.05). Lauric acid induces high levels of ROS[1].   |
| Kinase Assay  | JAK2 and other human kinase activity assays: JAK2 kinase activity was assessed with the HTScan JAK2 Kinase Assay Kit per manufacturer's protocol. The possible effects of FLLL32 on the other 10 purified human protein kinases were determined by using a Kinase Profiler Assay.   |
| Cell Research | Cell lines are harvested by enzymatic dissociation and seeded into 24-well tissue culture plates at 2.5 × 10 <sup>5</sup> and 1.5 × 10 <sup>5</sup> cells/ml, respectively. After 24 h of incubation, the medium is replaced with 1 ml of complete DMEM containing freshly prepared (50 mM ) Lauric acid, conjugated to 0.4% FAF-BSA to final concentrations of 0.1, 0.3, 0.5 and 1 mM and compared to NaB (5 mM ) with 50 µl of 0.4% FAF-BSA as a vehicle control and incubated in a humidified atmosphere at 37°C in 5% CO <sub>2</sub> and, after enzymatic dissociation, assayed at 24, 48, 72, and 96 h. All experimental studies are undertaken in triplicate and measured in duplicate. (Only for Reference) |

## Solubility Information

|            |   |
|------------|---|
| Solubility | Ethanol: 38 mg/mL (189.7 mM), Sonication is recommended.<br>DMSO: 260 mg/mL (1297.92 mM), Sonication is recommended.<br>H <sub>2</sub> O: 16 mg/mL (79.87 mM), Sonication is recommended.<br>( < 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|---|

### Preparing Stock Solutions

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|       | <b>1mg</b> | <b>5mg</b> | <b>10mg</b> |
|-------|------------|------------|-------------|
| 1 mM  | 4.992 mL   | 24.9601 mL | 49.9201 mL  |
| 5 mM  | 0.9984 mL  | 4.992 mL   | 9.984 mL    |
| 10 mM | 0.4992 mL  | 2.496 mL   | 4.992 mL    |
| 50 mM | 0.0998 mL  | 0.4992 mL  | 0.9984 mL   |

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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

Fausser JK, et al. Chemotherapy. 2013, 59(3):214-24.

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