

Product Data Sheet

Product Name: 12-oxo Phytodienoic Acid

Cat. No.: GC41888

Chemical Properties

Cas. No. 85551-10-6

Chemical Name 4-oxo-5 α -2Z-pentenyl)-2-cyclopentene-1 α -octanoic acid

SMILES O=C1[C@@H](C/C=C\CC)[C@@H](CCCCCCCC(O)=O)C=C1

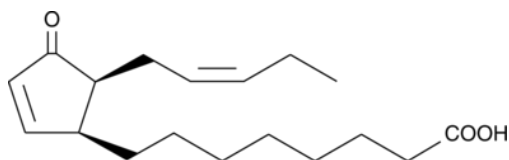
Formula C₁₈H₂₈O₃ M.Wt 292.4

Solubility DMF: 25 mg/ml DMSO: 10 mg/ml Storage Store at -80°C, protect from light
Ethanol: 100 mg/ml PBS (pH 7.2): 1 mg/ml

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

12-oxo Phytodienoic acid (OPDA) is a biologically active, immediate precursor of 7-epi jasmonic acid. [1] In addition to its link with jasmonic acid activity, OPDA appears to play an independent role in mediating resistance to pathogens and pests. As an endogenous signal transducer, OPDA has been shown to increase alkaloid biosynthesis in *E. californica* cell cultures, increase tendrill coiling of *B. dioica*, and suppress jasmonic acid-induced programmed cell death in a conditional *A. flu* mutant. [2]

Reference:

[1]. Schaller, A., and Stintzi, A. Enzymes in jasmonate biosynthesis - Structure, function, regulation. *Phytochemistry* 70, 1532-1538 (2009).

[2]. Böttcher, C., and Pollmann, S. Plant oxylipins: Plant responses to 12-oxo-phytodienoic acid are

Caution: Product has not been fully validated for medical applications. For research use only.

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governed by its specific structural and functional properties. FEBS Journal 276, 4693-4704 (2009).

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