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Produktinformation

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- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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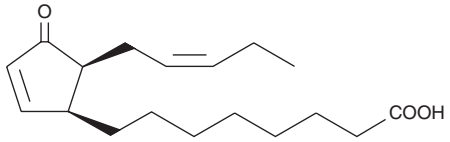
PRODUCT INFORMATION

12-oxo Phytodienoic Acid

Item No. 88520

CAS Registry No.:	85551-10-6
Formal Name:	4-oxo-5α-(2Z-pentenyl)-2-cyclopentene-1α-octanoic acid
Synonyms:	OPDA, 12-oxo PDA
MF:	$C_{18}H_{28}O_3$
FW:	292.4
Purity:	≥95%
Supplied as:	A solution in ethanol
Storage:	-80°C
Stability:	≥1 year



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

Laboratory Procedures

12-oxo Phytodienoic acid (OPDA) is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of OPDA in these solvents is approximately 15 and 25 mg/ml, respectively.

It is difficult to obtain an aqueous solution of OPDA directly. Organic solvent-free aqueous solutions of OPDA can be prepared in strongly basic buffers (pH > 8 and ionic strength > 0.1 M). Add 400 µl of buffer per mg of OPDA and agitate vigorously and/or ultrasonicate. The solubility of OPDA in PBS, pH 7.2, is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

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 tendril coiling of *B. dioica*, and suppress jasmonic acid-induced programmed cell death in a conditional *A. flu* mutant.[2]

References

1. Schaller, A. and Stintzi, A. Enzymes in jasmonate biosynthesis - structure, funtion, regulation. *Phytochemistry* **70**, 1532-1538 (2009).
2. Böttcher, C. and Pollmann, S. Plant oxylipins: Plant responses to 12-oxo-phytodienoic acid are governed by its specific structural and functional properties. *FEBS J.* **276**, 4693-4704 (2009).

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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