

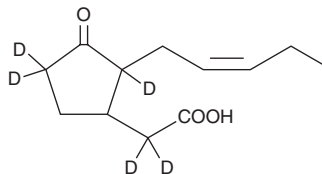
# PRODUCT INFORMATION



## (±)-Jasmonic Acid-d<sub>5</sub>

Item No. 29076

**CAS Registry No.:** 2750534-78-0  
**Formal Name:** 3-oxo-2-(2Z)2-penten-1-yl-cyclopentane-2,4,4-d<sub>3</sub>-acetic-2,2-d<sub>2</sub> acid  
**MF:** C<sub>12</sub>H<sub>13</sub>D<sub>5</sub>O<sub>3</sub>  
**FW:** 215.3  
**Chemical Purity:** ≥98% ((±)-Jasmonic Acid) (mixture of diastereomers)



**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>5</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solution in methyl acetate  
**Storage:** -20°C  
**Stability:** ≥2 years

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

### Laboratory Procedures

(±)-Jasmonic acid-d<sub>5</sub> is intended for use as an internal standard for the quantification of (±)-jasmonic acid (Item No. 88300) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

(±)-Jasmonic acid-d<sub>5</sub> is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate under a gentle stream of nitrogen and immediately add the solvent of choice. (±)-Jasmonic acid-d<sub>5</sub> is slightly soluble in methanol and chloroform.

### Description

Jasmonic acid (JA) is a plant growth regulator and derivative of α-linolenic acid (Item Nos. 90210 | 21910) that can exist in four stereoisomeric forms.<sup>1,2</sup> (-)-3(R),7(R)-JA and (+)-3(S),7(S)-JA have the two side chains in the *trans* configuration, whereas (-)-3(S),7(R)-JA and (+)-3(R),7(S)-JA have the two side chains in the *cis* configuration, which can epimerize at C7 to the *trans* configuration via keto-enol tautomerization.<sup>2</sup>

### References

1. Creelman, R.A. and Mullet, J.E. Biosynthesis and action of jasmonates in plants. *Annu. Rev. Plant Physiol. Plant Mol. Biol.* **48**, 355-381 (1997).
2. Holbrook, L., Tung, P., Ward, K., et al. Importance of the chiral centers of jasmonic acid in the responses of plants. Activities and antagonism between natural and synthetic analogs. *Plant Physiol.* **114**, 419-428 (1997).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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#### 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