

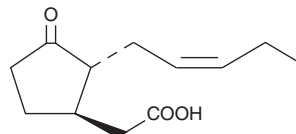
PRODUCT INFORMATION



(±)-Jasmonic Acid

Item No. 88300

CAS Registry No.: 77026-92-7
Formal Name: 3-oxo-2R-(2Z)2-penten-1R-yl-cyclopentaneacetic acid
MF: $C_{12}H_{18}O_3$
FW: 210.3
Purity: $\geq 98\%$ (sum of isomers)
Supplied as: A solution in ethanol
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 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 (DMF) purged with an inert gas can be used. The solubility of (±)-jasmonic acid in DMF is approximately 25 mg/ml and approximately 16 mg/ml in DMSO.

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. If an organic solvent-free solution of (±)-jasmonic acid is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of (±)-jasmonic acid in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

(±)-Jasmonic acid is a plant growth regulator and a derivative of α -linolenic acid (Item Nos. 90210 | 21910).¹ It decreases chlorophyll levels in green and etiolated barley leaf segments when used at concentrations of 10 and 50 μM .² (±)-Jasmonic acid (10-1,000 μM) inhibits elongation of rice seedlings.³ It increases germination of *S. hermonthica* seeds by 26% when used at a concentration of 1,000 μM .⁴

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. Miersch, O., Herrmann, H., Kramell, H.-M., et al. Biological activity of jasmonic acid glucosyl ester. *J. Plant Physiol.* **182**, 425-428 (1987).
3. Yamane, H., Sugawara, J., Suzuki, Y., et al. Synthesis of jasmonic acid related compounds and their structure-activity relationships on the growth of rice seedlings. *Agr. Biol. Chem.* **44**(12), 2857-2864 (1980).
4. Yoneyama, K., Ogasawara, M., Takeuchi, Y., et al. Effect of jasmonates and related compounds on seed germination of *Orobancha minor* Smith and *Striga hermonthica* (Del.) Benth. *Biosci. Biotechnol. Biochem.* **62**(7), 1448-1450 (1998).

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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