

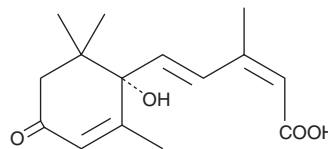
PRODUCT INFORMATION



(+)-Abscisic Acid

Item No. 10073

CAS Registry No.: 21293-29-8
Formal Name: 5-[(1S)-1-hydroxy-2,6,6-trimethyl-4-oxo-2-cyclohexen-1-yl]-3-methyl-2Z,4E-pentadienoic acid
Synonyms: (+)-ABA, Dormin
MF: C₁₅H₂₀O₄
FW: 264.3
Purity: ≥98%
UV/Vis.: λ_{max}: 256 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

(+)-ABA is supplied as a crystalline solid. A stock solution may be made by dissolving the (+)-ABA in the solvent of choice, which should be purged with an inert gas. (+)-ABA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of (+)-ABA in these solvents is approximately 20 mg/ml.

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. Organic solvent-free aqueous solutions of (+)-ABA can be prepared by directly dissolving the crystalline compound in aqueous buffers. The solubility of (+)-ABA in PBS (pH 7.2) is approximately 0.3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ABA is a plant hormone with diverse roles in disease resistance, plant development, and response to stresses (water, salt, temperature, and pathogens).¹⁻³ It is also produced by some plant pathogenic fungi. In addition to key roles in regulating stomatal closing, seed dormancy, and cell division, ABA regulates gene expression and may contribute to epigenetic changes at the chromatin level.⁴ The (+)-enantiomer is the naturally occurring and more active form of ABA.

References

1. Ton, J., Flors, V., and Mauch-Mani, B. The multifaceted role of ABA in disease resistance. *Trends in Plant Science* **14**(6), 310-317 (2009).
2. Seo, M., Nambara, E., Choi, G., et al. Interaction of light and hormone signals in germinating seeds. *Plant Mol. Biol.* **69**(4), 463-472 (2009).
3. Acharya, B.R. and Assmann, S.M. Hormone interactions in stomatal function. *Plant Mol Biol* **69**(4), 451-462 (2009).
4. Demetriou, K., Kapazoglou, A., Tondelli, A., et al. Epigenetic chromatin modifiers in barley: I. Cloning, mapping and expression analysis of the plant specific HD2 family of histone deacetylases from barley, during seed development and after hormonal treatment. *Physiol. Plant.* **136**(3), 358-368 (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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