

Product Data Sheet

Product Name: Absciscic Acid (Dormin)

Cat. No.: GC10740

Chemical Properties

Cas. No. 21293-29-8

Chemical Name (2Z,4E)-5-[(1S)-1-hydroxy-2,6,6-trimethyl-4-oxocyclohex-2-en-1-yl]-3-methylpenta-2,4-dienoic acid

SMILES CC1=CC(=O)CC(C1(C=CC(=CC(=O)O)C)O)(C)C

Formula $C_{15}H_{20}O_4$

M.Wt 264.32

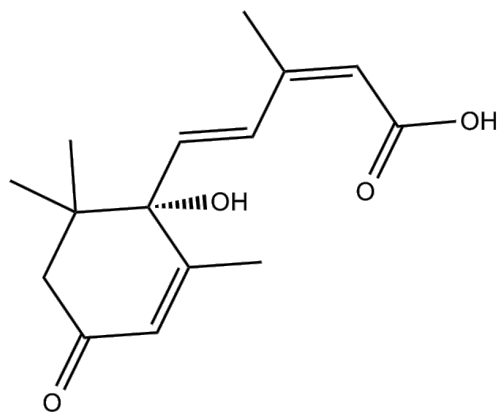
Solubility $\geq 8.9\text{mg/mL}$ in DMSO

Storage Store at -20°C

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

Absciscic Acid (Dormin) is a plant hormone.

Absciscic acid (ABA) is a plant hormone and plays an important role in regulating plant growth and development such as germination, seedling growth, lateral root development, seed development and seed dormancy [1].

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

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ABA is a plant hormone and plays an important role in abiotic stress tolerance. Histone H2B monoubiquitination regulated ABA levels in developing seeds. H2B ubiquitination and ABA dependent chromatin remodeling regulated seed dormancy. Abiotic stress-induced ABA regulated stressresponsive gene expression and stomatal response [1]. In *Arabidopsis thaliana* seedlings, ABA increased the biosynthesis of certain amino acids and raffinose family oligosaccharides and down-regulated genes that involved in the reorganization of cell walls. Also, ABA increased the levels of α -tocopherol and L-ascorbic acid, which were antioxidants. These results suggested that ABA induced crosstalk between pathways regulating redox homeostasis and metabolic pathways [2]. In leaves of maize, ABA attenuated UV-B-induced damage and maintained cell homeostasis through activation of NADPH oxidase (pNOX) and increase of H₂O₂ and NO production [3].

References:

- [1]. Chinnusamy V, Gong Z, Zhu JK. Absciscic acid-mediated epigenetic processes in plant development and stress responses. *J Integr Plant Biol*, 2008, 50(10): 1187-1195.
- [2]. Ghassemian M, Lutes J, Chang HS, et al. Absciscic acid-induced modulation of metabolic and redox control pathways in *Arabidopsis thaliana*. *Phytochemistry*, 2008, 69(17): 2899-2911.
- [3]. Tossi V, Lamattina L, Cassia R. An increase in the concentration of absciscic acid is critical for nitric oxide-mediated plant adaptive responses to UV-B irradiation. *New Phytol*, 2009, 181(4): 871-879.

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