

<b>Product Name:</b>	(±)-cis,trans-Absciscic acid (synthetic)
<b>Product Number:</b>	A068
<b>CAS Number:</b>	14375-45-2
<b>Molecular Formula:</b>	C <sub>15</sub> H <sub>20</sub> O <sub>4</sub>
<b>Molecular Weight:</b>	264.32
<b>Form:</b>	Powder
<b>Appearance:</b>	White Powder
<b>Solubility:</b>	soluble in methanol
<b>Water Content (Karl Fischer):</b>	≤0.25%
<b>Storage Conditions:</b>	-20°C
<b>Description:</b>	<p>(±)-Absciscic Acid (synthetic) is the synthetic form of Absciscic Acid (ABA), a classical plant growth regulator. It is a racemic mixture of equal amounts of its enantiomeric forms (+ and -, or S and R, respectively). It contains both cis and trans isomers. It is involved in many plant cellular processes such as stomatal movement, water and ion uptake control, leaf abscission and senescence.</p> <p>We also offer:</p> <ul style="list-style-type: none"> <li>• (+)-Absciscic Acid (natural) (<a href="#">A153</a>)</li> </ul>
<b>Mechanism of Action:</b>	<p>Absciscic acid (ABA) is a plant growth regulator produced indirectly from plant carotenoids. It can regulate the gene expression in plants via complex intracellular signaling. It plays an important role in response to environmental stress and plant pathogens. In mammals, ABA targets a protein called lanthionine synthetase C-like 2 (LANCL2), triggering a mechanism of activation of peroxisome proliferator-activated receptor gamma (PPAR gamma).</p>
<b>Plant Biology Applications</b>	<p>Compared with other plant growth regulators, the effects of ABA are multifaceted and can antagonize or modify the effects of other plant growth regulators. In embryo development and maturation, ABA has shown to regulate gene expression (George et al., 2008). In tissue culture ABA has shown a double effect on callus growth: at low concentrations ABA shows a positive effect on callus growth while higher concentrations demonstrate inhibitory callus growth effects (George et al., 2008).</p>

**References:**

Cutler SR, Rodriquez PL, Finkelstein RR and Abrams SR (2010) Absciscic acid: Emergence of a core signaling network. *Ann. Rev. Plant Biol.* 61:651-679

Finkelstein R (2013) Absciscic acid synthesis and response. *Arabidopsis Book*. 11:e0166 PMID 24273463

George EF, Hall MA. and Klerk GJD (2008) Chapter 7. Plant growth regulators III: Gibberellins, ethylene, absciscic acid, their analogues and inhibitors; Miscellaneous compounds. In: *Plant Propagation by Tissue Culture* 3<sup>rd</sup> ed.

If you need any help, contact us: [info@toku-e.com](mailto:info@toku-e.com). Find more information on: [www.toku-e.com/](http://www.toku-e.com/)