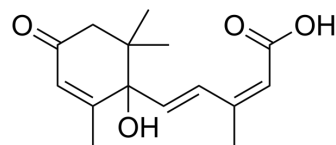


## (±)-Abscisic acid

<b>Cat. No.:</b>	HY-N2549		
<b>CAS No.:</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>Target:</b>	Calcium Channel		
<b>Pathway:</b>	Membrane Transporter/Ion Channel; Neuronal Signaling		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 250 mg/mL (945.82 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.7833 mL	18.9165 mL	37.8329 mL
	5 mM	0.7567 mL	3.7833 mL	7.5666 mL
	10 mM	0.3783 mL	1.8916 mL	3.7833 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.08 mg/mL (7.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.08 mg/mL (7.87 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.08 mg/mL (7.87 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

(±)-Abscisic acid ((±)-ABA) is an orally active phytohormone. (±)-Abscisic acid induces Ca<sup>2+</sup> channel opening to facilitate the influx of calcium ions and modulates stomatal movement. (±)-Abscisic acid shows anti-inflammatory activity and has the potential for the research of inflammatory bowel disease (IBD)<sup>[1][2]</sup>.

#### In Vitro

(±)-Abscisic acid (10 μM; 20 h) increase CTLA-4 expression in cultured lymphocytes<sup>[2]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.  
Immunofluorescence<sup>[2]</sup>

	Cell Line:	lymphocytes
	Concentration:	10 $\mu$ M
	Incubation Time:	20 h
	Result:	Significantly increased the percentage of CTLA-4 expressing cells and enhanced CTLA-4 median fluorescence intensity (MFI) on CD4 <sup>+</sup> T cells expressing PPAR $\gamma$ .
<b>In Vivo</b>	(±)-Abscisic acid (100 mg/kg; fed) significantly ameliorates disease activity, colitis and reduces colonic leukocyte infiltration and inflammation in colitis mice <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
	Animal Model:	6-8 weeks, C57BL/6J mice (2.5% dextran sodium sulfate (DSS) induces colitis) <sup>[2]</sup>
	Dosage:	100 mg/kg
	Administration:	Fed for 35 days
	Result:	Reduced disease activity and colonic inflammation, improved colon histopathology and reduces leukocyte infiltration, suppressed colonic expression of adhesion molecules.

## REFERENCES

[1]. Lim J, et al. Core Components of Abscisic Acid Signaling and Their Post-translational Modification. *Front Plant Sci.* 2022 May 30;13:895698.

[2]. Guri AJ, et al. Abscisic acid ameliorates experimental IBD by downregulating cellular adhesion molecule expression and suppressing immune cell infiltration. *Clin Nutr.* 2010 Dec;29(6):824-31.

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

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