

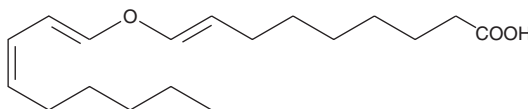
# PRODUCT INFORMATION



## Colneleic Acid

Item No. 10005076

**CAS Registry No.:** 52761-34-9  
**Formal Name:** 9-[(1E,3Z)-1,3-nonadien-1-yloxy]-8E-nonenic acid  
**Synonym:** FA 18:3;O  
**MF:** C<sub>18</sub>H<sub>30</sub>O<sub>3</sub>  
**FW:** 294.4  
**Purity:** ≥98%  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Description

Colneleic acid is a divinyl ether oxylipin and an active metabolite of linoleic acid (Item Nos. 90150 | 90150.1 | 21909) that has been found in potatoes.<sup>1-4</sup> It is formed from linoleic acid by 9-lipoxygenase (9-LO) via a (±)9-HpODE (Item No. 10705) intermediate and divinyl ether synthase.<sup>1,2</sup> Colneleic acid decreases *P. infestans* hyphae growth when used at concentrations of 15, 75, and 150 μM and reduces *P. infestans* cystospore germination in a concentration-dependent manner.<sup>3</sup> The levels of colneleic acid are increased in potato leaves following *P. infestans* infection and in rice seedlings following brown planthopper feeding.<sup>3,4</sup>

### References

1. Galliard, T. and Phillips, D.R. The enzymic conversion of linoleic acid into 9-(nona-1',3'-dienoxy)non-8-enoic acid, a novel unsaturated ether derivative isolated from homogenates of *Solanum tuberosum* tubers. *Biochem. J.* **129**, 743-753 (1972).
2. Fahlstadius, P. and Hamberg, M. Stereospecific removal of the pro-R hydrogen at C-8 of (9S)-hydroperoxyoctadecadienoic acid in the biosynthesis of colneleic acid. *J. Chem. Soc. Perkin 1* **1**, 2027-2030 (1990).
3. Weber, H., Chételat, A., Caldelari, D., *et al.* Divinyl ether fatty acid synthesis in late blight-diseased potato leaves. *Plant Cell* **11(3)**, 485-494 (1999).
4. Wang, R., Shen, W., Liu, L., *et al.* A novel lipoxygenase gene from developing rice seeds confers dual position specificity and responds to wounding and insect attack. *Plant Mol. Biol.* **66(4)**, 401-414 (2008).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/30/2024

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM