

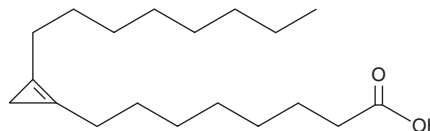
PRODUCT INFORMATION



Sterculic Acid

Item No. 26735

CAS Registry No.: 738-87-4
Formal Name: 2-octyl-1-cyclopropene-1-octanoic acid
Synonym: FA 19:2
MF: C₁₉H₃₄O₂
FW: 294.5
Purity: ≥98%
Supplied as: A liquid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Sterculic acid is supplied as a liquid. Sterculic acid is soluble in organic solvents such as chloroform, hexane, ethyl ether, and methanol, which should be purged with an inert gas.

Description

Sterculic acid is a cyclopropene fatty acid that has been found in *S. foetida*.¹ It is an inhibitor of Δ^9 -desaturase that decreases 9(Z)-myristoleic acid (Item No. 9002461) and increases oleic acid (Item No. 90260) and 9(Z),11(E)-conjugated linoleic acid (Item No. 90140) levels in the milk of lactating ewes when administered at a dose of 0.5 g per day.² It also inhibits endoplasmic reticulum stress induced by 7-keto cholesterol (Item No. 16339) in ARPE-19 cells when used at a concentration of 1 μ M and prevents the formation of choroidal neovascularization when applied to eyes at concentrations of 0.1 to 10 mM in a rat model of macular degeneration induced by laser injury.¹ Sterculic acid binds to a variety of kinases, including calcium/calmodulin-dependent protein kinase 2 (CAMKK2), mammalian sterile20-related kinase 3 (MST3), and p90 ribosomal S5 kinase 4 (RSK4).³

References

- Huang, J.-D., Amaral, J., Lee, J.W., *et al.* Sterculic acid antagonizes 7-ketocholesterol-mediated inflammation and inhibits choroidal neovascularization. *Biochim. Biophys. Acta.* **1821(4)**, 637-646 (2012).
- Bichi, E., Toral, P.G., Hervás, G., *et al.* Inhibition of Δ^9 -desaturase activity with sterculic acid: Effect on the endogenous synthesis of *cis*-9 18:1 and *cis*-9, *trans*-11 18:2 in dairy sheep. *J. Dairy Sci.* **95(9)**, 5242-5252 (2012).
- Huang, J.-D., Amaral, J., Lee, J.W., *et al.* 7-Ketocholesterol-induced inflammation signals mostly through the TLR4 receptor both *in vitro* and *in vivo*. *PLoS One* **9(7)**, e100985 (2014).

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, 03/07/2024

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