

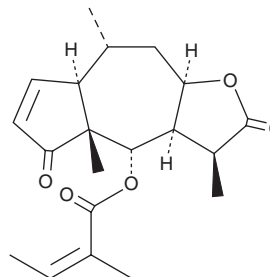
PRODUCT INFORMATION



Brevilin A

Item No. 33993

CAS Registry No.: 16503-32-5
Formal Name: (2Z)-2-methyl-2-butenic acid, 2,3S,3aR,4S,4aR,5,7aR,8R,9,9aR-decahydro-3,4a,8-trimethyl-2,5-dioxazuleno[6,5-b]furan-4-yl ester 6-O-Angeloylprenolin, Brevilin A
Synonyms:
MF: C₂₀H₂₆O₅
FW: 346.4
Purity: ≥98%
UV/Vis.: λ_{max}: 223 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Centipeda minima*



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

Laboratory Procedures

Brevilin A is supplied as a solid. A stock solution may be made by dissolving the Brevilin A in the solvent of choice, which should be purged with an inert gas. Brevilin A is soluble in the organic solvent DMSO at a concentration of approximately 100 mg/ml.

Description

Brevilin A is a sesquiterpene lactone that has been found in *C. minima* and has anticancer activity.¹ It is an inhibitor of STAT3 signaling (IC₅₀ = 10.6 μM in A549R cells) that inhibits the tyrosine kinase activity of the JAK1, JAK2, JAK3, and JAK4 JH1 subunit (IC₅₀s = 11.2, 8.4, 10.2, and 11.9 μM, respectively).² It inhibits proliferation of a variety of cancer cells, including A549 lung, HepG2 liver, HeLa cervical, A875 melanoma, and CT26 mouse colon carcinoma cells in a concentration-dependent manner.¹ Brevilin A (1-4 μg/ml) decreases the mitochondrial membrane potential, induces apoptosis, and increases the level of reactive oxygen species (ROS) in CT26 cells. It also induces autophagosome formation in CT26 cells, an effect that can be blocked by the PI3K inhibitor 3-methyladenine (Item No. 13242). Brevilin A (5 mg/kg per day) increases intratumor expression of the autophagy marker LC3-II and reduces tumor growth in a murine CT26 colon cancer model.

References

1. You, P., Wu, H., Deng, M., *et al.* Brevilin A induces apoptosis and autophagy of colon adenocarcinoma cell CT26 via mitochondrial pathway and PI3K/AKT/mTOR inactivation. *Biomed. Pharmacother.* **98**, 619-625 (2018).
2. Chen, X., Du, Y., Nan, J.X., *et al.* Brevilin A, a novel natural product, inhibits janus kinase activity and blocks STAT3 signaling in cancer cells. *PLoS One* **8(5)**, e63697 (2013).

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.

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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