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Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

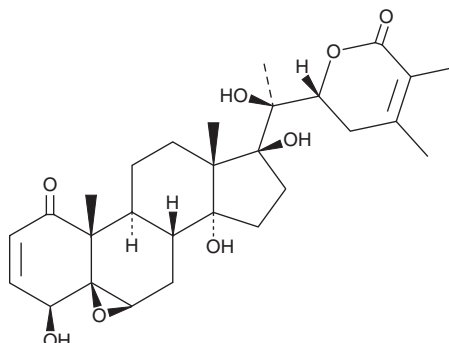
PRODUCT INFORMATION



4 β -Hydroxywithanolide E

Item No. 27245

CAS Registry No.: 54334-04-2
Formal Name: 5 β ,6 β -epoxy-4 β ,14,17 α ,20,22R-pentahydroxy-1-oxo-ergosta-2,24-dien-26-oic acid, δ -lactone
Synonym: NSC 212509
MF: C₂₈H₃₈O₈
FW: 502.6
Purity: \geq 95%
UV/Vis.: λ_{max} : 217 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 2 years
Item Origin: Plant/*Physalis peruviana*



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

Laboratory Procedures

4 β -Hydroxywithanolide E is supplied as a crystalline solid. A stock solution may be made by dissolving the 4 β -hydroxywithanolide E in the solvent of choice, which should be purged with an inert gas. 4 β -Hydroxywithanolide E is soluble in organic solvents such as ethanol, methanol, and chloroform.

Description

4 β -Hydroxywithanolide E is a withanolide steroidal lactone that has been found in *P. peruviana* and has anti-inflammatory and anticancer activities.¹⁻³ It inhibits LPS-induced nitric oxide (NO) production in RAW 264.7 cells and TNF- α -induced NF- κ B activity in HEK293 cells (IC₅₀s = 0.32 and 0.04 μ M, respectively).¹ 4 β -Hydroxywithanolide E (5 μ M) inhibits LPS-induced increases in inducible nitric oxide synthase (iNOS) and COX-2 levels and Akt and STAT1 phosphorylation in RAW 264.7 cells.² It inhibits Wnt signaling in HCT116 and SW480 colorectal cancer cells (IC₅₀s = 1.85 and 2.67 μ M, respectively).³ 4 β -Hydroxywithanolide E inhibits the proliferation of HCT116, SW480, HT-29, and LoVo cells (IC₅₀s = 0.24-0.51 μ M). It halts the cell cycle at the G₀/G₁ phase in HCT116 and HT-29 cells and induces apoptosis in HCT116 and SW480 cells in a concentration-dependent manner. 4 β -Hydroxywithanolide E (10 mg/kg per day for 14 days) reduces tumor growth in an HCT116 mouse xenograft model.

References

1. Sang-Ngern, M., Youn, U.J., Park, E.J., et al. Withanolides derived from *Physalis peruviana* (Poha) with potential anti-inflammatory activity. *Bioorg. Med. Chem. Lett.* **26(12)**, 2755-2759 (2016).
2. Park, E.J., Sang-Ngern, M., Chang, L.C., et al. Physalactone and 4 β -hydroxywithanolide E isolated from *Physalis peruviana* inhibit LPS-induced expression of COX-2 and iNOS accompanied by abatement of Akt and STAT1. *J. Nat. Prod.* **82(3)**, 492-499 (2019).
3. Ye, Z.N., Yuan, F., Liu, J.Q., et al. *Physalis peruviana*-derived 4 β -hydroxywithanolide E, a novel antagonist of Wnt signaling, inhibits colorectal cancer *in vitro* and *in vivo*. *Molecules* **24(6)**, E1146 (2019).

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

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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