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Produktinformation



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Laborgeräte & Service

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Zuschläge

- Mindermengenzuschlag
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SZABO-SCANDIC Handels GmbH

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



Triptolide-d₃ Item No. 34895

Formal Name: 3bS,4,4aS,6R,6aR,7aS,7bS,8bS,9,10-decahydro-6-hydroxy-8b-methyl-6a-(1-methylethyl)-trisoxireno[4b,5aS:6,7:8aS,9]phenanthro[1,2-c]furan-1(3H)-one-d₃

MF: C₂₀H₂₁D₃O₆

FW: 363.4

Chemical Purity: ≥90% (Triptolide)

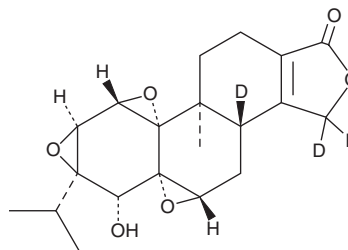
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

Supplied as: A solid

Storage: -20°C

Stability: ≥2 years

Item Origin: Synthetic



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

Laboratory Procedures

Triptolide-d₃ is intended for use as an internal standard for the quantification of triptolide (Item No. 11973) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Triptolide-d₃ is supplied as a solid. A stock solution may be made by dissolving the triptolide-d₃ in the solvent of choice, which should be purged with an inert gas. Triptolide-d₃ is slightly soluble in methanol (warmed) and DMSO.

Description

Triptolide is a diterpenoid triepoxide that has been found in *T. wilfordii* and has diverse biological activities.¹⁻⁴ It inhibits dCTP pyrophosphatase 1 (K_i = 168 μM), an enzyme that prevents halogenated nucleotides from entering DNA synthesis.¹ It reduces viability of A549, H1299, NCI H520, NCI H1650, and H1975 human non-small cell lung cancer (NSCLC) cells when used at a concentration of 50 nM.² Intranasal administration of liposomes containing triptolide (0.4 mg/kg) reduces tumor growth in a rat orthotopic model of lung cancer. Triptolide (0.2 mg/kg) reduces intestinal inflammation and prevents colon shortening in a mouse model of ulcerative colitis induced by dextran sulfate (Item No. 23250).³ It also inhibits skin allograft rejection and increases graft survival time in mice when administered at a dose of 0.1 mg/kg per day post-transplantation.⁴

References

1. Corson, T.W., Cavga, H., Aberle, N., *et al.* Triptolide directly inhibits dCTP pyrophosphatase. *ChemBioChem* **12**(11), 1767-1773 (2011).
2. Song, J.M., Molla, K., Anandharaj, A., *et al.* Triptolide suppresses the *in vitro* and *in vivo* growth of lung cancer cells by targeting hyaluronan-CD44/RHAMM signaling. *Oncotarget*. **8**(16), 26927-26940 (2017).
3. Tang, B., Zhu, J., Zhang, B., *et al.* Therapeutic potential of triptolide as an anti-inflammatory agent in dextran sulfate sodium-induced murine experimental colitis. *Front. Immunol.* **11**, 592084 (2020).
4. Yang, S.-X., Gao, H.-L., Xie, S.-S., *et al.* Immunosuppression of triptolide and its effect on skin allograft survival. *Int. J. Immunopharmacol.* **14**(6), 963-969 (1992).

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