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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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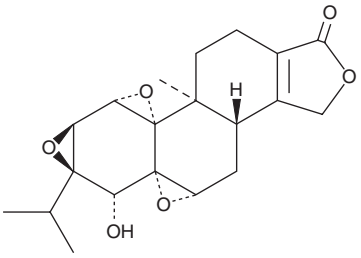
PRODUCT INFORMATION

Triptolide

Item No. 11973

CAS Registry No.: 38748-32-2
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
Synonyms: NSC 163062, PG 490
MF: $C_{20}H_{24}O_6$
FW: 360.4
Purity: ≥98%
UV/Vis.: λ_{max}: 217 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Plant/*Tripterygium wilfordii*



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

Laboratory Procedures

Triptolide is supplied as a crystalline solid. A stock solution may be made by dissolving the triptolide in the solvent of choice, which should be purged with an inert gas. Triptolide is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of triptolide in these solvents is approximately 11 and 12 mg/ml, respectively.

Triptolide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, triptolide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Triptolide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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 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).

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