

Product Name: Triptolide

Catalog No.: 3253

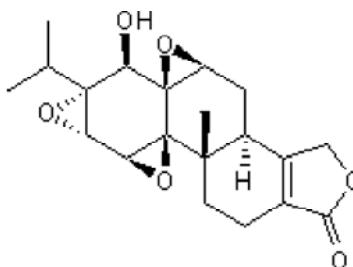
Batch No.: 3

CAS Number: 38748-32-2

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

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₀H₂₄O₆
Batch Molecular Weight: 360.4
Physical Appearance: White solid
Solubility: DMSO to 20 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.4% purity
¹H NMR: Consistent with structure
Optical Rotation: [α]_D = -168 (Concentration = 0.148, Solvent = Methanol)
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	66.65	6.71	
Found	66.64	6.67	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Triptolide inhibits DNA-dependent ATPase activity of XBP and induces inhibition of RNA polymerase II (RNAPII)-mediated transcription (IC₅₀ = 200 nM). Selective for RNAPII over RNAPI and RNAPIII. Triptolide blocks RNA synthesis in HeLa cells (IC₅₀ = 62 nM); exhibits potent antiproliferative activity in 60 cancer cell lines (average IC₅₀ = 12 nM) and induces apoptosis by blocking TNF-α-mediated c-IAP1 and c-IAP2 induction. Also displays immunosuppressive and anti-inflammatory activity.

Physical and Chemical Properties:

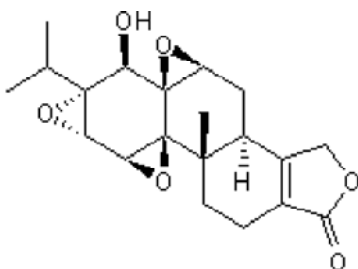
Batch Molecular Formula: C₂₀H₂₄O₆

Batch Molecular Weight: 360.4

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Titov et al (2011) XPB, a subunit of TFIIH, is a target of the natural product triptolide. *Nat.Chem.Biol.* **7** 182. PMID: 21278739.

Lee et al (1999) PG490 (Triptolide) cooperates with tumor necrosis factor-α to induce apoptosis in tumor cells. *J.Biol.Chem.* **274** 13451. PMID: 10224110.

Qui et al (1999) Immunosuppressant PG490 (Triptolide) inhibits T-cell interleukin-2 expression at the level of purine-box/nuclear factor of activated T-cells and NF-κB transcriptional activation. *J.Biol.Chem.* **274** 13443. PMID: 10224109.

Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 20 mM

When purchased as a 1mg unit, this product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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