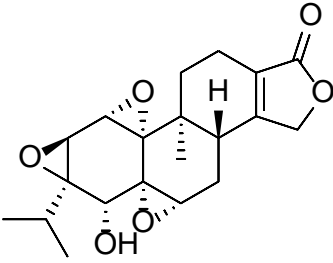


Product data sheet



MedKoo Cat#: 406463 Name: Triptolide CAS#: 38748-32-2 Chemical Formula: C ₂₀ H ₂₄ O ₆ Exact Mass: 360.1573 Molecular Weight: 360.40		
Product supplied as:		Powder
Purity (by HPLC):		≥ 98%
Shipping conditions		Ambient temperature
Storage conditions:		Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

Triptolide, also known as PG490, is a diterpenoid epoxide found in the Thunder God Vine, *Tripterygium wilfordii*, which has been used in traditional Chinese medicine for more than two thousand years to treat immune-related disorders. Triptolide is a promising immunosuppressive and anti-inflammatory agent. Triptolide is also a potent anti-cancer agent against many cancer cell lines.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	37.40	103.77
DMF	12.0	33.30
DMF:PBS (pH 7.2) (1:1)	0.50	1.39

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.77 mL	13.87 mL	27.75 mL
5 mM	0.55 mL	2.77 mL	5.55 mL
10 mM	0.28 mL	1.39 mL	2.77 mL
50 mM	0.06 mL	0.28 mL	0.55 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Reno TA, Kim JY, Raz DJ. Triptolide Inhibits Lung Cancer Cell Migration, Invasion, and Metastasis. *Ann Thorac Surg*. 2015 Nov;100(5):1817-24; discussion 1824-5. doi: 10.1016/j.athoracsur.2015.05.074. Epub 2015 Aug 20. PMID: 26298168; PMCID: PMC4630145.

In vivo study

1. Reno TA, Kim JY, Raz DJ. Triptolide Inhibits Lung Cancer Cell Migration, Invasion, and Metastasis. *Ann Thorac Surg*. 2015 Nov;100(5):1817-24; discussion 1824-5. doi: 10.1016/j.athoracsur.2015.05.074. Epub 2015 Aug 20. PMID: 26298168; PMCID: PMC4630145.

7. Bioactivity

Biological target: Triptolide is a NF-κB activation inhibitor.

In vitro activity

Product data sheet



To investigate if triptolide has an effect on lung cancer cell migration, triptolide treated NSCLC (non-small cell lung cancer) cells were plated on Transwell filters coated with the solid substrate chemoattractant fibronectin. Triptolide treatment significantly decreased the migration of all three lung cancer cell lines compared to the DMSO control cells (Figure 2). Cellular adhesion to fibronectin was similar between the control and treatment groups in all three cell lines indicating that triptolide does not affect cell attachment to the extracellular matrix.

Reference: Ann Thorac Surg. 2015 Nov;100(5):1817-24. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4630145/>

In vivo activity

The effect of triptolide in lung cancer cell metastasis was investigated in vivo. Tail vein injections of H358 cells were performed in NOD SCID gamma (NSG) mice as an experimental model to assess metastatic colonization. Mice treated with triptolide had significantly less metastatic colonization of the lungs compared to the vehicle control mice (Figure 4). This data suggests that triptolide could be a potential therapeutic for targeting lung cancer progression.

Reference: Ann Thorac Surg. 2015 Nov;100(5):1817-24. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4630145/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.