Revision 1

Store at -20C

#97539

Triptolide

5 mg

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Background

Triptolide is an immunosuppressive and anti-inflammatory compound produced by the thunder god vine, *Tripterygium wilfordii* Hook F (1). Covalent binding of Triptolide to human XPB/ERCC3 inhibits its DNA-dependent ATPase activity and prevents nucleotide excision repair by the TFIIH complex (2). Triptolide has proven to be an effective synergistic therapy for inhibition of pancreatic cancer cell growth, with IC_{50} values of 0.01 µM and 0.02 µM in Capan-1 and Capan-2 adenocarcinoma cells, respectively (3,4). In addition to its anti-tumor activity, Triptolide has shown antiviral efficacy in HIV-1 and dengue virus via inhibition of Tat protein and COX-2, respectively (5,6).

Molecular Formula

$C_{20}H_{24}O_6$

Molecular Weight

360.4 g/mol

Purity

>98%

CAS

38748-32-2

Solubility

Soluble in DMSO at 7 mg/ml.

Storage

Store lyophilized at -20ºC, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20ºC and use within 1 month to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

Directions for Use

Triptolide is supplied as a lyophilized powder. For a 10 mM stock, reconstitute 5 mg of powder in 1.38 ml of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

Background References

1. Li, F.Q. et al. (2004) *J Neuroimmunol* 148, 24-31.
2. Titov, D.V. et al. (2011) *Nat Chem Biol* 7, 182-8.
3. Qiao, Z. et al. (2016) *Oncol Lett* 11, 3527-33.
4. Kim, S.T. et al. (2018) *BMC Cancer* 18, 1103.
5. Wan, Z. and Chen, X. (2014) *Retrovirology* 11, 88.
6. Liou, J.T. et al. (2008) *Eur J Pharmacol* 589, 288-98.

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