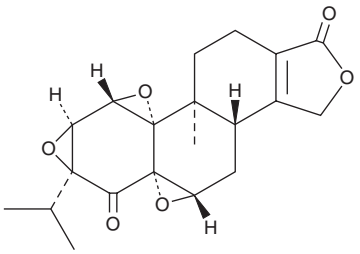
PRODUCT INFORMATION

(–)-Triptonide

Item No. 29156

CAS Registry No.:	38647-11-9
Formal Name:	(3bS,4aS,5aS,6aS,7aS,7bS,8aS,8bS)-3b,4,4a,7a,7b,8b,9,10-octahydro-8b-methyl-6a-(1-methylethyl) trisoxireno[4b,5:6,7:8a,9] phenanthro[1,2-c]furan-1,6(3H,6aH)-dione
Synonyms:	NSC 165677, Triptonide
MF:	$C_{20}H_{22}O_6$
FW:	358.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 215 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years
Item Origin:	Plant/*Tripterygium wilfordii* Hook F



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

Laboratory Procedures

(–)-Triptonide is supplied as a crystalline solid. A stock solution may be made by dissolving the (–)-triptonide in the solvent of choice, which should be purged with an inert gas. (–)-Triptonide is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of (–)-triptonide in these solvents is approximately 10 mg/ml. (–)-Triptonide is slightly soluble in ethanol.

(–)-Triptonide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (–)-triptonide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. (–)-Triptonide 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

(–)-Triptonide is a diterpenoid that has been found in *T. wilfordii* and has diverse biological activities, including immunosuppressant and anticancer properties.[1,2] It inhibits IL-2 production and DNA synthesis in phytohemagglutinin-stimulated T cells (EC_{50}s = 2.46 and 3.2 ng/ml, respectively).[1] (–)-Triptonide inhibits the proliferation of PC3, DU145, and LNCaP cells (IC_{50}s = 11.96, 10.26, 12.01 nM, respectively).[2] It induces cell cycle arrest at the G_2/M phase and increases apoptosis in PC3 cells in a concentration-dependent manner. (–)-Triptonide (10 mg/kg per day) reduces tumor growth in a PC3 mouse xenograft model.

References

1. Tao, X., Cai, J.J., and Lipsky, P.E. The identity of immunosuppressive components of the ethyl acetate extract and chloroform methanol extract (T2) of tripterygium wilfordii Hook. F. *J. Pharmacol. Exp. Ther.* **272(3),** 1305-1312 (1995).
2. Dong, F., Yang, P., Wang, R., *et al.* Triptonide acts as a novel antiprostate cancer agent mainly through inhibition of mTOR signaling pathway. *Prostate* **79(11),** 1284-1293 (2019).

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