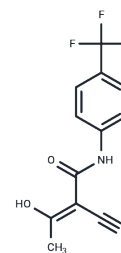


Teriflunomide

Chemical Properties

CAS No. :	163451-81-8
Formula:	C ₁₂ H ₉ F ₃ N ₂ O ₂
Molecular Weight:	270.21
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Teriflunomide (A 77-1726) is the principal active metabolite of leflunomide, an approved therapy for rheumatoid arthritis and multiple sclerosis.
Targets(IC50)	Others, Drug Metabolite
In vitro	Teriflunomide primarily acts as an inhibitor of dihydroorotate dehydrogenase (DHODH), a key mitochondrial enzyme involved in the de novo synthesis of pyrimidines in rapidly proliferating cells. By reducing the activity of high-avidity proliferating T lymphocytes and B lymphocytes, teriflunomide likely attenuates the inflammatory response to autoantigens in MS. Notably, DHODH blockade does not affect resting or homeostatically proliferating hematopoietic cell lines, as pyrimidine pools in these cells can be generated through an alternate 'salvage pathway,' which is independent of DHODH. Thus, teriflunomide can be considered a cytostatic rather than a cytotoxic drug to leukocytes [1].

Solubility Information

Solubility	DMSO: 29.41 mg/mL (108.84 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn oil: 4.17 mg/mL (15.43 mM), Solution. 10% DMSO+90% (20% SBE-β-CD in Saline): < 2.94 mg/mL (10.88 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+90% Saline: < 2.94 mg/mL (10.88 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: < 2.94 mg/mL (10.88 mM), Lower concentrations may be soluble, but exact solubility limit is unknown. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7008 mL	18.5041 mL	37.0083 mL
5 mM	0.7402 mL	3.7008 mL	7.4017 mL
10 mM	0.3701 mL	1.8504 mL	3.7008 mL
50 mM	0.074 mL	0.3701 mL	0.7402 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Paul O , Oh . An update of teriflunomide for treatment of multiple sclerosis[J]. Therapeutics and Clinical Risk Management, 2013:177-.

Luo S, Wu F, Fang Q, et al. Antidepressant effect of teriflunomide via oligodendrocyte protection in a mouse model. Heliyon.2024

He D , Xu Z , Dong S , et al. Teriflunomide for multiple sclerosis[J]. Cochrane database of systematic reviews (Online), 2012, 12(12):CD009882.

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