

Certificate of Analysis

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Product Name: Teriflunomide

Catalog No.: 5069

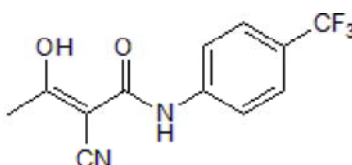
Batch No.: 2

CAS Number: 108605-62-5

IUPAC Name: 2-Cyano-3-hydroxy-*N*-[4-(trifluoromethyl)phenyl]-2-butenamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₂H₉F₃N₂O₂.
Batch Molecular Weight: 270.21
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.34	3.36	10.37
Found	53.42	3.32	10.35

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

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Description:

Teriflunomide is an inhibitor of dihydroorotate dehydrogenase ($K_d = 12$ nM; $K_i = 179$ nM). Inhibits proliferation of mitogen- or cytokine-stimulated lymphoid cells in vitro by inhibiting cell cycle progression from G₁ to S. Immunosuppressive agent. Active metabolite of leflunomide.

Physical and Chemical Properties:

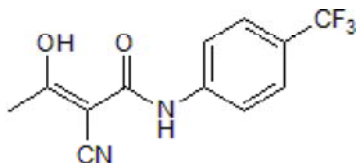
Batch Molecular Formula: C₁₂H₉F₃N₂O₂.

Batch Molecular Weight: 270.21

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

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.

References:

Iglesias-Bregna et al (2013) Effects of prophylactic and therapeutic teriflunomide in transcranial magnetic stimulation-induced motor-evoked potentials in the dark agouti rat model of experimental autoimmune encephalomyelitis. *J.Pharmacol.Exp.Ther.* **347** 203. PMID: 23892570.

Davis et al (1996) The immunosuppressive metabolite of leflun. is a potent inhibitor of human dihydroorotate dehydrogenase. *Biochemistry* **35** 1270. PMID: 8573583.

Williamson et al (1995) Dihydroorotate dehydrogenase is a high affinity binding protein for A77 1726 and mediator of a range of biological effects of the immunomodulatory compound. *J.Biol.Chem.* **270** 22467. PMID: 7673235.

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