Print Date: Jan 3rd 2014

Certificate of Analysis

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Product Name: Teriflunomide **Catalog No.: 5069** **Batch No.: 1**

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: $C_{12}H_9F_3N_2O_2$

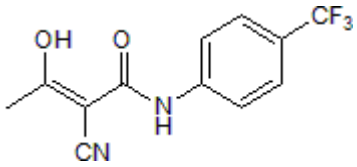
Batch Molecular Weight: 270.21

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 5 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	53.34	3.36	10.37
Found	53.41	3.31	10.36

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Description:

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 G_1 to S. Imunosuppressive agent. Active metabolite of leflunomide (Cat. No. 2228).

Physical and Chemical Properties:

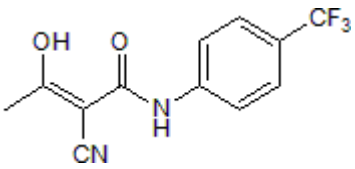
Batch Molecular Formula: $C_{12}H_9F_3N_2O_2$

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
ethanol to 5 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:

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.

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

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.