Vidofludimus

Cat. No.: HY-14908

CAS No.: 717824-30-1

Molecular Formula: $C_{20}H_{18}FNO_4$

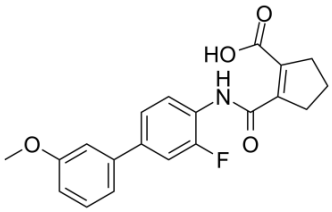
Molecular Weight: 355.36

Target: Dihydroorotate Dehydrogenase; DNA/RNA Synthesis; Interleukin Related

Pathway: Metabolic Enzyme/Protease; Cell Cycle/DNA Damage; Immunology/Inflammation

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 46 mg/mL (129.45 mM)

H_2O : < 0.1 mg/mL (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.8140 mL	14.0702 mL	28.1405 mL
5 mM	0.5628 mL	2.8140 mL	5.6281 mL
10 mM	0.2814 mL	1.4070 mL	2.8140 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: 2.5 mg/mL (7.04 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (7.04 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.04 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Vidofludimus(4SC-101; SC12267) is a novel immunosuppressive drug that inhibits DHODH; inhibits IL-17 secretion in vitro independently of effects on lymphocyte proliferation.IC50 value:Target: DHODH inhibitorin vitro: 4SC-101 is a potent inhibitor of human DHODH, inhibits lymphocyte proliferation, and uniquely blocks phytohemagglutinin-stimulated IL-17 production by lymphocytes [2].in vivo: In vivo Vido treatment alone most effectively reduced macroscopic and histological pathology and the numbers of CD3+ T cells. In contrast, similarly reduced nuclear signal transducer and activator of

	transcription 3 (STAT3) binding and IL-17 levels were observed from animals treated with Vido alone and Vido + Uri. Vido improves TNBS-induced colonic inflammation by a unique dual mode of action [1]. Oral administration of 4SC-101 effectively improved both chronic DSS and acute TNBS colitis in mice. In these colitis models the overall efficacy profile of 4SC-101 was similar to that of dexamethasone [2].
IC_{50} & Target	IL-17

REFERENCES

[1]. Fitzpatrick LR, et al. Vidofludimus inhibits colonic interleukin-17 and improves hapten-induced colitis in rats by a unique dual mode of action. J Pharmacol Exp Ther. 2012 Sep;342(3):850-60.

[2]. Fitzpatrick LR, et al. 4SC-101, a novel immunosuppressive drug, inhibits IL-17 and attenuates colitis in two murine models of inflammatory bowel disease. Inflamm Bowel Dis. 2010 Oct;16(10):1763-77.

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