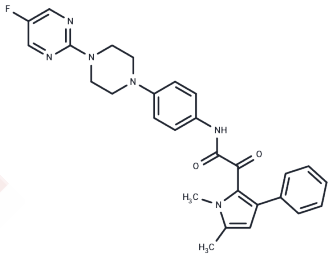
Data Sheet (Cat.No.T27300)

TargetMol

Olorofim

Chemical Properties



CAS No. : 1928707-56-5

Formula: C28H27FN6O2

Molecular Weight: 498.55

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	Olorofim(F-901318)is a novel selective antifungal compound targeting pyrimidine biosynthesis in mycobacteria, with inhibitory effect on Aspergillus fumigatus DHODH (IC50: 44 nM), but little inhibitory effect on human DHODH (>100 uM).Olorofim has good efficacy against a variety of pathogenic filamentous and dimorphic fungi, such as Penicillium spp, P. dermatitidis spp and Fusarium spp.
Targets(IC50)	Antifungal,Dehydrogenase
In vitro	**METHODS**: 10 4 spores were suspended in 80 µl RPMI 1640 medium, buffered to pH 7.0 (with MOPS) and inoculated into 96-well microtiter plates. Then 20 µ Olorofim (F-901318) 0.0001-1 µg/ml was added to each well and the plates were incubated at 28°C. MICs were assessed by microtiter after 96 h of incubation. **RESULTS** Dermatophytes were highly susceptible to Olorofim in vitro (MIC = 0.015–0.06 mg/L). [1] **METHODS**: Olorofim was used to determine the in vitro antifungal activity of 246 azole-susceptible A. fumigatus isolates, 5 A. fumigatus isolates with TR34/L98H-mediated resistance, 19 Rhizopus isolates, 21 Fusarium species isolates, and one isolate each of 6 other fungi. **RESULTS** Olorofim showed consistent antifungal activity against azole-susceptible A. fumigatus isolates (MIC50 = 0.008 µg/mL); all A. fumigatus isolates fell within the one- to two-fold dilution range of the MIC50 (0.008 µg/mL); five azole-resistant A. fumigatus isolates with Cyp51A-associated point mutations had MIC values of 0.008 µg/mL. [3]
In vivo	**METHODS**: A guinea pig model of dermatophytosis was established. Starting from the eighth day after infection, Olorofim（F-901318） (0.1 mg/ml in PEG300) was topically applied every day at a dose of 10 µg/lesion site for 7 days. **RESULTS** Skin lesions resolved and normal hair growth pattern occurred. [1] **METHODS**: Cyclophosphamide-immunosuppressed CD-1 mice infected with Scedosporium apiospermum, Pseudallescheria boydii (Scedosporium boydii), and Lomentospora prolificans were treated with intraperitoneal administration of olorofim (15 mg/kg every 8 hours for 9 days). The efficacy of olorofim treatment was assessed by survival 10 days post-infection, serum (1-3)-β-d-glucan (BG) levels 3 days post-infection, histopathology, and renal fungal burden. **RESULTS** In olorofim-treated mice, serum BG levels were significantly suppressed, fungal DNA detected in target organs was significantly lower than in controls, and no or only a few bands were observed in histopathological observations of mouse kidneys.

In vivo	Lesions with hyphal elements. [2]

Solubility Information

Solubility	DMSO: 50 mg/mL (100.29 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0058 mL	10.0291 mL	20.0582 mL
5 mM	0.4012 mL	2.0058 mL	4.0116 mL
10 mM	0.2006 mL	1.0029 mL	2.0058 mL
50 mM	0.0401 mL	0.2006 mL	0.4012 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

Mirbzadeh Ardakani E, et al. Olorofim Effectively Eradicates Dermatophytes In Vitro and In Vivo. Antimicrob Agents Chemother. 2021 Nov 17;65(12):e0138621.
Shao Y, Shao J, de Hoog S, et al.Emerging Antifungal Resistance in Trichophyton mentagrophytes: Insights from Susceptibility Profiling and Genetic Mutation Analysis.Emerging Microbes & Infections.2025 (just-accepted): 2450026.
Seyedmousavi S, et al. In Vivo Efficacy of Olorofim against Systemic Scedosporiosis and Lomentosporiosis. Antimicrob Agents Chemother. 2021 Sep 17;65(10):e0043421.
Georgacopoulos O, et al. In Vitro Activity of Novel Antifungal Olorofim against Filamentous Fungi and Comparison to Eight Other Antifungal Agents. J Fungi (Basel). 2021 May 12;7(5):378.
Lim W, et al. Madurella mycetomatis, the main causative agent of eumycetoma, is highly susceptible to olorofim. J Antimicrob Chemother. 2020;75(4):936-941.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481