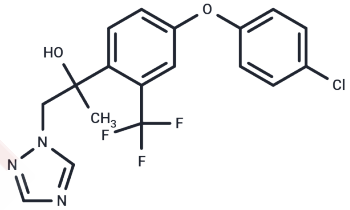
Data Sheet (Cat.No.T11991)

TargetMol

Mefentrifluconazole

Chemical Properties



CAS No. : 1417782-03-6

Formula: C18H15ClF3N3O2

Molecular Weight: 397.78

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	Mefentrifluconazole is a potent, selective and orally active fungal CYP51 (Kd= 0.5 nM) inhibitor, but shows less inhibitory activity on human aromatase (IC50=0.92 μM). Mefentrifluconazole is a novel azole derivative and used as an agrochemical broad-spectrum antifungal agent.
Targets(IC50)	Antifungal,Cytochromes P450
In vivo	In the acute and repeat dose toxicity studies performed with Mefentrifluconazole.?A single-dose administration to rats the LD50 is >2000?mg/kg bwt by the oral route, >5000?mg/kg bwt by the dermal route, and >5.314?mg/L by inhalation as a dust aerosol.?Mefentrifluconazole is not a skin or an eye irritant, nor is it a phototoxicant in vitro.In the acute neurotoxicity study in rats, Mefentrifluconazole (oral administration;?2000?mg/kg bwt;?single dose) gives rise to reduce body weight gain and transient neurobehavioral effects only on the day of treatment (unsteady gait, reduced motor activity, reduces grip strength of the forelimbs and increased distance between the hind limbs in the landing foot-splay test).In the repeated-dose toxicity studies, the liver is the target organ in each of the three species investigated.?At higher dose levels in the rat (oral diets;?383/334 mg/kg/bwt/d (4000 ppm)) and the C57BL/6JRj mouse (61 mg/kg bwt/d (300 ppm)), reduces body weight gain and food consumption, alters clinical chemistry parameters, increases liver weight and is accompanied by liver cell hypertrophy, and/or liver cell necrosis.?At low doses, increases liver weight is not associated with any histopathological alterations and is considered to be an adaptive change to treatment.

Solubility Information

Solubility	DMSO: 250 mg/mL (628.49 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (12.57 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.514 mL	12.5698 mL	25.1395 mL
5 mM	0.5028 mL	2.514 mL	5.0279 mL
10 mM	0.2514 mL	1.257 mL	2.514 mL
50 mM	0.0503 mL	0.2514 mL	0.5028 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

Tesh SA, et al. Innovative selection approach for a new antifungal agent mefentrifluconazole (Revysol®) and the impact upon its toxicity profile. Regul Toxicol Pharmacol. 2019 Aug;106:152-168.
Liu Y, Ma T, Dong Y, et al. Bioactivity of mefentrifluconazole against different Fusarium spp. Pesticide Biochemistry and Physiology. 2022: 105169