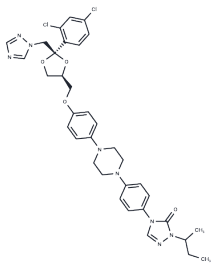
Data Sheet (Cat.No.T1011)

TargetMol

Itraconazole

Chemical Properties



CAS No. : 84625-61-6

Formula: C35H38Cl2N8O4

Molecular Weight: 705.63

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	Itraconazole (R51211) is a triazole antifungal agent that inhibits cytochrome P-450-dependent enzymes necessary for ERGOSTEROL synthesis.
Targets(IC50)	Hedgehog/Smoothened,Antibacterial,Antibiotic,Autophagy,Antifungal,Cytochromes P450
In vitro	Like other Hedgehog (Hh) pathway antagonists, Itraconazole can inhibit the activity of the Hh pathway and the growth of medulloblastoma in a murine syngeneic transplant model.
In vivo	Itraconazole exhibits affinity for mammalian cytochrome P-450 enzymes and fungal P-450-dependent enzymes, thereby possessing potential for clinically significant interactions with azoles (e.g., simvastatin, terfenadine, rifampin, oral contraceptives, H2 receptor antagonists, warfarin, cyclosporine). Metabolized into hydroxy-itraconazole (OH-ITZ) and two novel metabolites, keto-itraconazole (keto-ITZ) and N-desalkyl itraconazole (ND-ITZ), its metabolites are inhibitors of CYP3A4 as potent, or more so, than itraconazole itself. Itraconazole acts on the hedgehog (Hh) signaling pathway component Smoothened with a mechanism distinct from cyclopamine and other known SMO antagonists, preventing SMO accumulation stimulated by Hh activation. It inhibits 60 clinical isolates of Aspergillus with MICs at 0.25 mg/mL, primarily by damaging ergosterol synthesis, leading to defective fungal cell membranes with altered permeability and function.

Solubility Information

Solubility	DMSO: 8 mg/mL (11.34 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: 0.71 mg/mL (1.01 mM),Suspension. *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	1.4172 mL	7.0859 mL	14.1717 mL
5 mM	0.2834 mL	1.4172 mL	2.8343 mL
10 mM	0.1417 mL	0.7086 mL	1.4172 mL
50 mM	0.0283 mL	0.1417 mL	0.2834 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

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