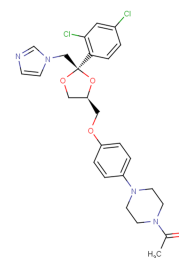


(+)-Ketoconazole

Chemical Properties

CAS No. :	142128-59-4
Formula:	C ₂₆ H ₂₈ Cl ₂ N ₄ O ₄
Molecular Weight:	531.43
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	(+)-Ketoconazole ((+)-R 41400) is a broad-spectrum oral antifungal compound, a CYP3A4 inhibitor, used for the study of fungal infections and seborrheic dermatitis.
Targets(IC50)	Antifungal,Cytochromes P450
In vitro	(+)-Ketoconazole, an imidazole derivative, is a broad-spectrum systemic antifungal agent with oral activity that effectively inhibits CYP3A4 activity in human liver microsomes. [1]
In vivo	Perinatal exposure of female rats to (+)-Ketoconazole (3-6-12mg/kg.d), adolescence or adulthood (3-12-48mg/kg.d) showed that perinatal exposure to the highest dose of (+)-Ketoconazole delayed the maturation of GnRH secretion before puberty, while adolescent or adult exposure had no effect on GnRH pulsation. [2]

Solubility Information

Solubility	DMSO: 20 mg/mL (37.63 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: 2 mg/mL (3.76 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8817 mL	9.4086 mL	18.8172 mL
5 mM	0.3763 mL	1.8817 mL	3.7634 mL
10 mM	0.1882 mL	0.9409 mL	1.8817 mL
50 mM	0.0376 mL	0.1882 mL	0.3763 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

Eil C. Ketoconazole binds to the human androgen receptor. *Horm Metab Res.* 1992 Aug;24(8):367-70.

Franssen D, et al. Perinatal exposure to the fungicide ketoconazole alters hypothalamic control of puberty in female rats. *Front Endocrinol (Lausanne).* 2023 Apr 3;14:1140886.

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