Prochloraz

Cat. No.: HY-B0845

CAS No.: 67747-09-5

Molecular Formula: $C_{15}H_{16}Cl_3N_3O_2$

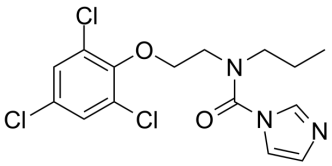
Molecular Weight: 376.67

Target: Fungal; Estrogen Receptor/ERR; Androgen Receptor; Aryl Hydrocarbon Receptor

Pathway: Anti-infection; Vitamin D Related/Nuclear Receptor; 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 : 250 mg/mL (663.71 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.6548 mL	13.2742 mL	26.5484 mL
5 mM	0.5310 mL	2.6548 mL	5.3097 mL
10 mM	0.2655 mL	1.3274 mL	2.6548 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.52 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.52 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.98 mg/mL (5.26 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Prochloraz is an imidazole antifungal. Prochloraz is as an estrogen receptor (ER) and androgen receptor (AR) antagonist and an aromatase inhibitor with IC_{50} values of 25 μM, 4 μM and 0.3 μM, respectively. Prochloraz is able to activate the aryl hydrocarbon receptor (AhR) having an EC_{50} of 1 μM[1][2].

IC_{50} & Target

IC50: 25 μM (Estrogen receptor), 4 μM (Androgen receptor) and 0.3 μM (Aromatase)[2]
EC50: 1 μM (Aryl hydrocarbon receptor (AhR))[2]

In Vitro	Prochloraz has a strong inhibition of the microsomal cytochrome P-450 dependent 14α-demethylation of lanosterol during ergosterol biosynthesis, which leads to membrane disruption and eventually to cell death[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In vivo Prochloraz acts as an antiandrogen in the Hershberger assay by reducing weights of reproductive organs, affecting androgen-regulated gene expressions in the prostate and increasing luteinizing hormone levels. In order to investigate the developmental effects of Prochloraz, pregnant Wistar dams were dosed perinatally with 30 mg/kg Prochloraz. Results show that Prochloraz significantly reduces plasma and testicular testosterone levels in gestational day 21 male foetuses, whereas testicular progesterone was increased. Gestational length is increased by Prochloraz[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. E Antignac, et al. Prochloraz as potent inhibitor of benzo[a]pyrene metabolism and mutagenic activity in rat liver fractions. Toxicol Lett. 1990 Dec;54(2-3):309-15.

[2]. Anne Marie Vinggaard, et al. Prochloraz: an imidazole fungicide with multiple mechanisms of action. Int J Androl. 2006 Feb;29(1):186-92.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA