Imazalil sulfate

Cat. No.: HY-B1134A

CAS No.: 58594-72-2

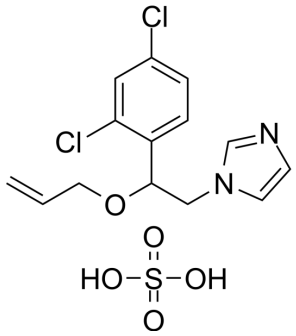
Molecular Formula: $C_{14}H_{16}Cl_2N_2O_5S$

Molecular Weight: 395.26

Target: Fungal

Pathway: Anti-infection

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Imazalil (Enilconazole) sulfate is a fungicide. Imazalil sulfate has oral activity and strongly activates mPXR but not mCAR in mouse liver. Imazalil sulfate is commonly used to protect various agricultural crops against fungal attack. Imazalil sulfate induces developmental abnormalities, gut microbiota dysbiosis, and hepatic metabolism disorder[1][2][3].

In Vitro

Imazalil (Enilconazole; 3, 10, 30 μM; for 6 h) sulfate significantly suppressed IL-17 mRNAs[1].
imazalil (1, 3, 10, 30, 100 μM; for 24 h) sulfate dose-dependently induces the reporter gene expression only in mPXR-expressed HepG2 cells[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

RT-PCR[1]

Cell Line:	EL4 cells
Concentration:	3, 10, 30 μM
Incubation Time:	6 h
Result:	Significantly suppressed IL-17 mRNAs.

In Vivo

Imazalil (Enilconazole; 25-100 mg/kg; IP) sulfate significantly increases hepatic Cyp3a11 mRNA levels in a dose-dependent manner[2].
Imazalil (75 mg/kg; ip; twice; once a day) sulfate combined with TCPOBOP (3 mg/kg) much greatly increased the number of Ki-67-positive nuclei and Mcm2 mRNA levels compared to its single treatment. Imazalil sulfate accelerates hepatocyte proliferation mediated by TCPOBOP treatment in mice[2].
Imazalil (0.1, 0.5, or 2.5 mg/kg in drinking water for 15 weeks) sulfate induces oxidative stress and caused the disorders of bile acid metabolism in male adult C57BL/6 mice [3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	IMZ Male C57BL/6N mice[2]
Dosage:	25, 50, 75, 100 mg/kg
Administration:	Intraperitoneally; single dose

Result:	Significantly increased hepatic Cyp3a11 mRNA levels in a dose-dependent manner.

REFERENCES

[1]. Hiroyuki Kojima, et al. Inhibitory effects of azole-type fungicides on interleukin-17 gene expression via retinoic acid receptor-related orphan receptors α and γ. Toxicol Appl Pharmacol. 2012 Mar 15;259(3):338-45.

[2]. Shohei Yoshimaru, et al. Acceleration of murine hepatocyte proliferation by imazalil through the activation of nuclear receptor PXR. J Toxicol Sci. 2018;43(7):443-450.

[3]. Cuiyuan Jin, et al. Chronic exposure of mice to low doses of imazalil induces hepatotoxicity at the physiological, biochemical, and transcriptomic levels. Environ Toxicol. 2018 Jun;33(6):650-658.

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