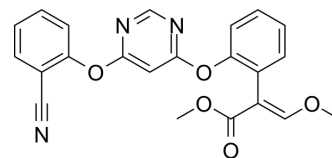


Azoxystrobin

Cat. No.:	HY-B0849		
CAS No.:	131860-33-8		
Molecular Formula:	C ₂₂ H ₁₇ N ₃ O ₅		
Molecular Weight:	403.39		
Target:	Fungal; Reactive Oxygen Species; Apoptosis; Bacterial; Phosphatase		
Pathway:	Anti-infection; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (247.90 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	2.4790 mL	12.3950 mL	24.7899 mL
		5 mM	0.4958 mL	2.4790 mL	4.9580 mL
10 mM		0.2479 mL	1.2395 mL	2.4790 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (6.20 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (6.20 mM); Suspended solution; Need ultrasonic				

BIOLOGICAL ACTIVITY

Description	Azoxystrobin is an orally active, broad-spectrum β-methoxyacrylate fungicide. Azoxystrobin inhibits mitochondrial respiration by binding to the Qo site of the cytochrome bc1 complex and inhibiting electron transfer. Azoxystrobin induces the production of reactive oxygen species (ROS) and induces cell apoptosis ^{[1][2][3][4]} .
In Vitro	Azoxystrobin (1, 5, 25 mg/L, 1 hour) significantly reduces the germination rate of <i>C. macrocarpum</i> spores and the length of mycelial growth in a dose-dependent manner. Azoxystrobin exhibits inhibitory effects on <i>C. macrocarpum</i> ^[2] . Azoxystrobin (25 mg/L, 1 hour) significantly delays the germination of <i>A. alternata</i> spores, reduces the final germination rate, and inhibits mycelial growth and papilla formation. Azoxystrobin demonstrates a clear inhibitory effect on <i>A. alternata</i> ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Azoxystrobin (0.5, 1, 10 mg/kg; Azoxystrobin solution is mixed with dry oat and administered orally; twice a week; 21 days) has a dose effect on the bacterial and fungal communities in the gut of *E. crypticus*, inducing the growth of pathogens, reducing the abundance of beneficial bacteria and disrupting the stability of the gut microecology^[4].

Azoxystrobin (0, 2, 25, 50 mg/kg) inhibits the activity of urease, Invertase (HY-P2979), and phosphatase, and alters the relative abundance of soil microbial communities^[3].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	<i>E. crypticus</i>
Dosage:	0.5, 1, 10 mg/kg
Administration:	Solution mixed with dry oats orally; twice a week; 21 days
Result:	At 10 mg/kg significantly reduced the number of larvae. Caused a dose-dependent effect on the diversity, composition, and stability of the Clostridia gut microbiota. Directly affected the gut bacterial community and indirectly affected the normalized abundance of ARGs (copies/bacterial cell).

REFERENCES

- [1]. Bertelsen, J.R, et al. Fungicidal effects of azoxystrobin and epoxiconazole on phyllosphere fungi, senescence and yield of winter wheat. *Plant Pathology*, 50: 190-205.
- [2]. Zhang Q, et al. Oral azoxystrobin driving the dynamic change in resistome by disturbing the stability of the gut microbiota of *Enchytraeus crypticus*. *J Hazard Mater*. 2022 Feb 5;423(Pt B):127252.
- [3]. Wang X, et al. Fungicide azoxystrobin induced changes on the soil microbiome[J]. *Applied Soil Ecology*, 2020, 145: 103343.
- [4]. Enock Mpofu, et al. Azoxystrobin amine: A novel azoxystrobin degradation product from *Bacillus licheniformis* strain TAB7. *Chemosphere*. 2021 Jun;273:129663.

Caution: Product has not been fully validated for medical applications. For research use only.

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