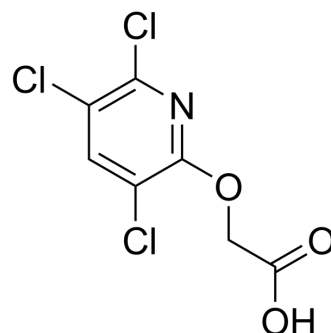


Triclopyr

Cat. No.:	HY-B2051		
CAS No.:	55335-06-3		
Molecular Formula:	C ₇ H ₄ Cl ₃ NO ₃		
Molecular Weight:	256.47		
Target:	Fungal		
Pathway:	Anti-infection		
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 : 125 mg/mL (487.39 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.8991 mL	19.4955 mL	38.9909 mL
	5 mM	0.7798 mL	3.8991 mL	7.7982 mL
	10 mM	0.3899 mL	1.9495 mL	3.8991 mL

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

BIOLOGICAL ACTIVITY

Description

Triclopyr, a foliar systemic herbicide and fungicide, is widely used for broadleaf and woody plant control. Triclopyr has severe toxicity^[1].

In Vitro

Triclopyr (3 mM; 48 hours) treatment exhibits cytotoxicity against N2a cells^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Cytotoxicity Assay^[1]

Cell Line:	Mouse neuroblastoma (N2a) cells
Concentration:	3 mM
Incubation Time:	48 hours
Result:	Decreased significantly for cell viability (P < 0.0001) compared to the untreated N2a cells.

In Vivo

Pharmacokinetic Analysis

Triclopyr exhibits moderate half-lives (dog 25 h and monkey 6.3 h) due to plasma clearance (18 mL/h/kg, 26 mL/h/kg respectively) following oral gavage (3 male beagle dogs ;0.5 mg/kg, 5 mg/kg and 20 mg/kg) and intravenous administration (1 male rhesus monkey; 30 mg/kg) [2].

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

Animal Model:	3 male beagle dogs(7.2 - 7.9 kg), 1 male rhesus monkey [2]
Dosage:	0.5 mg/kg, 5 mg/kg, 20 mg/kg (beagle dog); 30 mg/kg (rhesus monkey)
Administration:	Oral gavage (beagle dog); intravenous (rhesus monkey)
Result:	T _{1/2} s of 25 and 6.3 h for dogs and a monkey, respectively.

REFERENCES

[1]. Tejaswini P Reddy, et al. Toxicity of neurons treated with herbicides and neuroprotection by mitochondria-targeted antioxidant SS31. Int J Environ Res Public Health. 2011 Jan;8(1):203-21.

[2]. C Timchalk, et al. Pharmacokinetics of triclopyr (3,5,6-trichloro-2-pyridinyloxyacetic acid) in the beagle dog and rhesus monkey: perspective on the reduced capacity of dogs to excrete this organic acid relative to the rat, monkey, and human. Toxicol Appl Pharmacol. 1997 Jun;144(2):268-78.

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

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