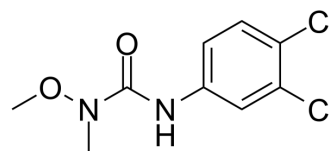


Linuron

Cat. No.:	HY-B1866		
CAS No.:	330-55-2		
Molecular Formula:	C ₉ H ₁₀ Cl ₂ N ₂ O ₂		
Molecular Weight:	249.09		
Target:	Androgen Receptor		
Pathway:	Others		
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 : 100 mg/mL (401.46 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	4.0146 mL	20.0731 mL	40.1461 mL
		5 mM	0.8029 mL	4.0146 mL	8.0292 mL
10 mM		0.4015 mL	2.0073 mL	4.0146 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: ≥ 2.5 mg/mL (10.04 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (10.04 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Linuron is a phenylurea herbicide that is widely used to control the growth of grass and weeds in various agriculture crops and in orchards. Linuron is a photosystem II inhibitor. Linuron is also a competitive androgen receptor (AR) antagonist with a K _i of 100 μM. Linuron shows reproductive toxicity in animals that acts as an endocrine disruptor ^{[1][2][3][4]} .
IC₅₀ & Target	Ki: 100 μM (Androgen receptor) ^[2] Photosystem II ^[4]

REFERENCES

[1]. Benjamin Horemans, et al. Functional Redundancy of Linuron Degradation in Microbial Communities in Agricultural Soil and Biopurification Systems. *Appl Environ Microbiol.* 2016 Apr 18;82(9):2843-2853.

[2]. C Lambright, et al. Cellular and Molecular Mechanisms of Action of Linuron: An Antiandrogenic Herbicide That Produces Reproductive Malformations in Male Rats. *Toxicol Sci.* 2000 Aug;56(2):389-99.

[3]. Hongwei Ding, et al. Reproductive Toxicity of Linuron Following Gestational Exposure in Rats and Underlying Mechanisms. *Toxicol Lett.* 2017 Jan 15;266:49-55.

[4]. Elżbieta G Magnucka, et al. Various Effects of the Photosystem II--inhibiting Herbicides on 5-n-alkylresorcinol Accumulation in Rye Seedlings. *Pestic Biochem Physiol.* 2014 Nov;116:56-62.

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

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