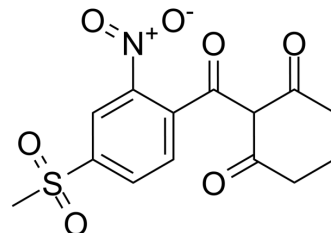


Mesotrione

Cat. No.:	HY-12853		
CAS No.:	104206-82-8		
Molecular Formula:	C ₁₄ H ₁₃ NO ₇ S		
Molecular Weight:	339.32		
Target:	Reactive Oxygen Species		
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB		
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 (294.71 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.9471 mL	14.7354 mL	29.4707 mL
		5 mM	0.5894 mL	2.9471 mL	5.8941 mL
10 mM		0.2947 mL	1.4735 mL	2.9471 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.5 mg/mL (7.37 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (7.37 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (7.37 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Mesotrione is a herbicide belongs to the benzoylcyclohexanedione family. Mesotrione is a potent and competitive and reversible inhibitor of HPPD enzyme. Mesotrione is selective to maize due to rapid metabolism and relative high tolerance by the susceptible crop plant ^[1] .
IC₅₀ & Target	Target: HPPD enzyme ^[1]
In Vitro	Mesotrione is a potent HPPD enzyme inhibitor, giving an estimated K _i value in the range 6±18pM at 25°C. HPPD is from

Arabidopsis thaliana (L)^[1].

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

In Vivo

Mesotrione (oral administration; 1 mg/kg; single dose) is rapidly and extensively absorbed in rats and mice. After a single dose, the urinary excretion is estimated, the urinary excretion estimated absorption values ranged from 62.2% in males and 68.3% in females. The mean peak blood concentration (C_{max}) of radioactivity occurred 0.5 hours after dosing in each sex [1].

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

REFERENCES

[1]. G Mitchell, et al. Mesotrione: A New Selective Herbicide for Use in Maize. Pest Manag Sci. 2001 Feb; 57(2):120-8.

[2]. CLH report. Proposal for Harmonised Classification and Labelling. Based on Regulation (EC) No 1272/2008 (CLP Regulation), Annex VI, Part 2. Substance Name: Mesotrione

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

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