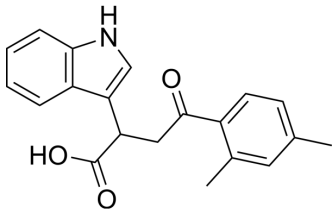
Auxinole

Cat. No.:	HY-111444		
CAS No.:	86445-22-9		
Molecular Formula:	$C_{20}H_{19}NO_3$		
Molecular Weight:	321.37		
Target:	Others		
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 : ≥ 125 mg/mL (388.96 mM)

Ethanol : 2.5 mg/mL (7.78 mM; ultrasonic and warming and heat to 60°C)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.1117 mL	15.5584 mL	31.1168 mL
5 mM	0.6223 mL	3.1117 mL	6.2234 mL
10 mM	0.3112 mL	1.5558 mL	3.1117 mL

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

In Vivo

1. Add each solvent one by one: 5% DMSO >> 40% PEG300 >> 5% Tween-80 >> 50% saline
   Solubility: ≥ 2.5 mg/mL (7.78 mM); Clear solution
2. Add each solvent one by one: 5% DMSO >> 95% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.78 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.47 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.47 mM); Clear solution
5. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.47 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Auxinole is a potent auxin antagonist of TIR1/AFB receptors, binding TIR1 to block the formation of the TIR1-IAA-Aux/IAA

	complex and so inhibits auxin-responsive gene expression.
IC_{50} & Target	TIR1/AFB receptor[1]
In Vitro	Auxinole is a potent auxin antagonist of TIR1/AFB receptors, and binds TIR1 to block the formation of the TIR1-IAA-Aux/IAA complex and then inhibits auxin-responsive gene expression. In addition, Auxinole competitively inhibits various auxin responses in planta[1]. Auxinole causes reduction in IAA-triggered depolarization in root hair cells. Auxinole (20 μM) also represses the transient increase in $[Ca^{2+}]_{cyt}$ completely, and blocks Ca^{2+} response[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Mol Cell. 2021 Dec 6;S1097-2765(21)00996-5.
- Mol Cell. 2021 Nov 5;S1097-2765(21)00907-2.
- J Integr Plant Biol. 2022 Jan;64(1):5-22.
- New Phytol. 2019 Oct;224(1):258-273.
- Curr Biol. 2022 May 9;32(9):1883-1894.e7.

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REFERENCES

[1]. Hayashi K, et al. Rational design of an auxin antagonist of the SCF(TIR1) auxin receptor complex. ACS Chem Biol. 2012 Mar 16;7(3):590-8.

[2]. Dindas J, et al. AUX1-mediated root hair auxin influx governs SCFTIR1/AFB-type Ca2+ signaling. Nat Commun. 2018 Mar 21;9(1):1174.

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